Commonwealth of Kentucky
Environmental and Public Protection Cabinet
Department for Environmental Protection
Division for Air Quality
803 Schenkel Lane
Frankfort, Kentucky 40601
(502) 573-3382

Draft

AIR QUALITY PERMIT
Issued under 401 KAR 52:020

Permittee Name:	**Westlake Vinyls, Inc.**
Mailing Address:	**2468 Industrial Parkway, Calvert City, Kentucky 42029**
Source Name:	**Westlake Vinyls, Inc.**
Mailing Address:	**2468 Industrial Parkway Calvert City, Kentucky 42029**
Source Location:	**2468 Industrial Parkway**
Permit ID:	**V-05-011**
Agency Interest #:	**2966**
Activity ID:	**APE20050001**
Review Type:	**Title V, Operating**
Source ID:	**21-157-00039**
Regional Office:	**Paducah Regional Office 130 Eagle Nest Drive Paducah, KY 42003 (270) 898-8468**
County:	**Marshall**
Application Complete Date:	**May 1, 2007**
Issuance Date:	
Revision Date:	
Expiration Date:	

John S. Lyons, Director
Division for Air Quality

Revised 09/29/06

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	Permit type	**Log or Activity#**	**Complete Date**	**Issuance Date**	**Summary of Action**
V-00-022	**Initial Issuance**	**F903**	**4/5/00**	**6/30/00**	**Initial Title V Permit**
V-05-011	**Renewal**	**APE20050001**	**4/21/05**	**TBA**	**Permit Renewal**

SECTION A - PERMIT AUTHORIZATION

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

SINGLE SOURCE DETERMINATION:

North American Pipe Corporation, Westlake PVC Corporation, and Westlake Vinyls Incorporated are a single "major source" as defined in 401 KAR 52:001, Section 1(45)(a), definition of major source. Each owner/operator is responsible and liable for their own violations, unless there is a joint cause for the violations.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

INDEX OF EMISSION POINTS LISTED IN SECTION B

CHLOR-ALKALI AND OLEFINS PLANT

CHLOR-ALKALI PLANT:

ETHYLENE PLANT:

ENERGY AND ENVIRONMENTAL PLANT:

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

INDEX OF EMISSION POINTS LISTED IN SECTION B

MONOMERS PLANT:

MONOMERS PLANT:

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

CHLOR-ALKALI PLANT:

EU# 003	(EPN 011)	**Boiler #4**
	Type:	Combustion Engineering, 28 VP - 12WL
	Capacity:	125.0 mmBtu/hr
	Primary fuels:	Process Fuel Gas*
	Date of construction:	1966
	Source of Emissions:	Fuel combustion
	Control Device:	None

* Process fuel gas includes natural gas, ethylene plant fuel gas, hydrogen, propane and mixtures thereof.

APPLICABLE REGULATIONS:
401 KAR 61:015, *Existing indirect heat exchangers*.

1. **Operating Limitations:** None

2. **Emission Limitations:**
   For any combination of fuels -
   Mass Emission Limits:
   a. Emissions of particulate matter shall not exceed 0.16 lb/mmBtu [401 KAR 61:015, Section 4 (1) and Permit O-88-040].
   b. Emissions of sulfur dioxide shall not exceed 0.33 lb/mmBtu [401 KAR 61:015, Section 5 (1) and Permit O-88-040].
   c. Emissions of particulate matter shall not exceed 80.2 tons during any twelve (12) consecutive months [*Synthetic Minor Limit*, Permit O-88-040].
   d. Emissions of sulfur dioxide shall not exceed 165.4 tons during any twelve (12) consecutive months [*Synthetic Minor Limit*, Permit O-88-040].

   Visible Emission Limits:
   e. For any fuel used, the opacity of visible emissions shall not exceed 20 percent [401 KAR 61:015, Section 4 (2)] except as provided below:
      (1) Pursuant to 401 KAR 61:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.
      (2) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

   Compliance Demonstration Method:
   a. Compliance with the particulate matter limit (lb/mmBtu), the sulfur dioxide limit (lb/mmBtu), and the opacity limit is demonstrated while burning process fuel gas.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

CHLOR-ALKALI PLANT:

EU# 003 EPN 011 **Boiler #4**

2. **Emission Limitations:** (continued)
Compliance Demonstration Method: (continued)
b. Compliance with the annual particulate matter and SO_2 emission limits (tons per year) shall be determined through the following formula:

Actual Annual Emissions of PM or SO_2 (tpy) =
[Amount of each fuel used per year x Emission factor for PM or SO_2 (in lbs/ft^3 or lbs/gallon of that fuel)] / 2000 (lb/ton)

The permittee shall calculate and maintain records of the monthly emissions of PM and SO_2 and the 12-month rolling total of emissions for each pollutant.

3. **Testing Requirements:**
Pursuant to 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

4. **Specific Monitoring Requirements:**
The permittee shall monitor the process fuel gas consumption for Boiler #4. The rate of fuel burned shall be measured daily or at shorter intervals and recorded. The heating value and ash content of fuel shall be ascertained at least once per week and recorded [401 KAR 61:015, Section 6 (3)]. Compliance with 401 KAR 61:015 can be demonstrated by monthly measurements and records of fuel burned.

5. **Specific Recordkeeping Requirements:**
Refer to **4. Specific Monitoring Requirements**.

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

CHLOR-ALKALI PLANT:

EU# 013	(EPN 801)	Salt Handling and Transfer Operations: Maximum salt throughput – 572,500 tons per year
	EPN 801A	Salt Hopper
	EPN 801B	Conveyor Belt Transfer
	EPN 801C	Stockpile Loading Operations
	EPN 801D	Stockpile Storage - Wind Erosion
	801 A, B, C, & D	Date of Construction: 1966
EU# 019	(EPN 849)	No. 5 Cooling Water Tower 2 cells with recirculation rate of 13,000 gallons/minute total Equipped with mist eliminator Date of Construction: 1966
EU# 040	(EPN 853)	No. 6 Cooling Water Tower 3 cells with recirculation rate of 15,200 gallons/minute total Equipped with mist eliminator Date of Construction: 2008

APPLICABLE REGULATIONS:
401 KAR 63:010, *Fugitive emissions*, applies to the salt handling, transfer operations, and cooling water tower.

1. **Operating Limitations:**
   None

2. **Emission Limitations:**
   All reasonable measures shall be taken to prevent particulate matter from becoming airborne at all times [401 KAR 63:010, Section 3(1)]. These measures shall include, but are not limited to the following:
   a. Use of plastic strips or curtains (or equivalent) to minimize fugitive emissions by wind dispersion at the stockpile stacker.
   b. Use of a wet suppression system at the transfer point from the salt hopper to the covered transfer conveyor. The system shall use a freeze-proof surfactant (or an equivalent dust suppressant) as the suppression agent.
   c. The Cooling Towers (849 and 853) shall be equipped with mist eliminators.

   Compliance Demonstration Method:
   The wet suppression system shall be interlocked with the transfer conveyor so that the conveyor will not operate if the wet suppression system is not operational.

3. **Testing Requirements:**
   None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

CHLOR-ALKALI PLANT:

EU# 013	(EPN 801)	Salt Handling and Transfer Operations:
	EPN 801A	Salt Hopper
	EPN 801B	Conveyor Belt Transfer
	EPN 801C	Stockpile Loading Operations
	EPN 801D	Stockpile Storage - Wind Erosion
EU# 019	(EPN 849)	No. 5 Cooling Water Tower
EU# 040	(EPN 853)	No. 6 Cooling Water Tower

4. Specific Monitoring Requirements:
None

5. Specific Recordkeeping Requirements:
None

6. Specific Reporting Requirements:
None

7. **Specific Control Equipment Operating Conditions:**
None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

CHLOR-ALKALI PLANT:

EU# 014 (EPN 813) Sodium Hypochlorite (Chlorine Conversion/Neutralization) Tower
EU# 015 (EPN 852) Membrane Cell Room Ventilation
EU# 016 (EPN 877) Atmospheric Scrubber
EU# 017 (EPN 887) HCl Synthesis Scrubber

Descriptions:

EU# 014 EPN 813

Sodium Hypochlorite (Chlorine Conversion/Neutralization) Tower

Description –Vent streams containing chlorine from process equipment are collected and vented through the Sodium Hypochlorite Tower. This tower is a packed bed scrubber using sodium hydroxide solution to neutralize the chlorine in the scrubber. The vent streams controlled include vapors from the Westlake CA&O chlorine production process equipment, chlorine wastewater treatment systems, chlorine barge and railcar loading/unloading operations, and chlorine storage bullets.

EU# 015 EPN 852 Membrane Cell Room Ventilation

Description- The ridge vents from the building are expected to emit chlorine (Cl_2) from fugitive sources within the Cell Room. Emission rates of HAPs are estimated using maximum expected Cl_2 concentration.

EU# 017 EPN 887 HCl Synthesis Scrubber

Description- Vent is expected to emit hydrogen chloride (HCl) and chlorine (Cl_2). Emission rates of HAPs are estimated using design vent gas flow rate and design vent gas characteristic (based on manufacturer's specifications). The HCl absorber is integral to the production process and not a control device.

EU# 016 EPN 877 Atmospheric Scrubber

Description – Vent streams containing chlorine from process equipment are collected and vented through the Atmospheric Scrubber/Vent. This tower is a packed bed scrubber using sodium hydroxide solution to neutralize the chlorine in the scrubber. The vent streams controlled include streams from the CA&O chlorine production process equipment and chlorine wastewater treatment systems.

APPLICABLE REGULATIONS:

State-Only Regulation:

401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to the chlorine emissions from the three scrubbers and the membrane cell room ventilation, as listed above (EPN 813, 852, 887, and 877).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

CHLOR-ALKALI PLANT:

EU# 014	(EPN 813) Sodium Hypochlorite (Chlorine Conversion/Neutralization) Tower
EU# 015	(EPN 852) Membrane Cell Room Ventilation
EU# 016	(EPN 877) Atmospheric Scrubber
EU# 017	(EPN 887) HCl Synthesis Scrubber

Non-applicable Regulations:
40 CFR 63 Subpart F, G, and H, *National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry for Process Vents, Storage Vessels, Transfer Operations, and Wastewater*, do not apply because the primary product is not a synthetic organic chemical [40 CFR 63.100(b)].

1. **Operating Limitations:**
   a. For personal exposure purposes, as requested by the facility, the following condition applies for EU# 017 (EPN 887), the HCl Synthesis Unit shall be designed as an integral furnace, absorber, and scrubber such that the unit will shutdown in case of burner or absorber/scrubber failure.
   b. Control of Potentially Hazardous Matter and Toxic Substances: Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants [401 KAR 63:020].

   Compliance Demonstration Method:
   a. The permittee shall maintain records of the design specifications for the HCl Synthesis Unit documenting that the operating limitations specified above have been incorporated into the design of the unit.
   b. Refer to Section F.9 for compliance certification reporting and Section 7. Specific Control Equipment Operating Conditions.

2. **Emission Limitations:** None

3. **Testing Requirements:**
   Pursuant to 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

CHLOR-ALKALI PLANT:

EU# 014	(EPN 813) Sodium Hypochlorite (Chlorine Conversion/Neutralization) Tower
EU# 015	(EPN 852) Membrane Cell Room Ventilation
EU# 016	(EPN 877) Atmospheric Scrubber
EU# 017	(EPN 887) HCl Synthesis Scrubber

4. Specific Monitoring Requirements:

a. For the Sodium Hypochlorite Scrubber (813), the permittee shall maintain, calibrate and operate according to manufacturer specification, a monitoring device for the continuous measurement (one reading every 15 minutes) of the oxidation-reduction potential (ORP).

b. For the Atmospheric Scrubber (877), the permittee shall maintain, calibrate and operate according to manufacturer's specification, a monitoring device for the continuous measurement (one reading every 15 minutes) of the oxidation reduction potential (ORP).

5. Specific Recordkeeping Requirements:

The permittee shall maintain hourly average records of the following information: the oxidation-reduction potential at the Sodium Hypochlorite Scrubber (813); and Atmospheric Scrubber (877).

6. Specific Reporting Requirements:

None

7. Specific Control Equipment Operating Conditions:

For the Sodium Hypochlorite (Chlorine Conversion/Neutralization) Tower and Atmospheric Scrubber: the tower and scrubber shall be operated at a maximum oxidation-reduction potential (ORP) of 1000 mV (3-hour average). An **excursion** from the operating range specified above is any 3-hour period during which the 3-hour average ORP was above the maximum specified.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

CHLOR-ALKALI PLANT:

EU# 018 (EPN FUG-CA-1) Chlor-alkali plant Cl_2/HCl Fugitives

Description – Chlorine & Hydrogen Chloride Fugitive emissions from approximately (1046) gas/vapor valves, (9) light liquid pumps, (4,749) flanges, (52) gas/vapor pressure relief valves, and (7) gas/vapor compressors.

EU# 020 (EPN FUG-CA-2) Chlor-alkali Plant Fugitives

Description – VOC Fugitive emissions from approximately (22) light liquid valves, (88) flanges, (2) gas/vapor pressure relief valves, and (1) light liquid pump. Stream composition (by average weight fraction): 98% Carbon Tetrachloride and 2% Nitrogen Trichloride.

Date Constructed: 1966. Modified: 2002.
Emissions/emission factors are based on EPA-453/R-95-017, November 1995.

NOTE - The pipeline equipment count listed above reflects an accurate count of the equipment as of the date of issuance of this permit but is not intended to limit the permittee to the exact numbers specified. The permittee may add or remove pipeline equipment without a permit revision as long as the equipment continues to comply with the applicable requirements listed below.

APPLICABLE REGULATIONS:
State-Only Regulation:
401 KAR 63:020, *Potentially hazardous matter or toxic substances*, applies to the chlorine and VOC emissions from the units listed above (EPN FUG-CA-1 and EPN FUG-CA-2).

NON-APPLICABLE REGULATIONS:
40 CFR 63 FFFF, *National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing*, is not applicable to (EPN FUG-CA-1) or (EPN FUG-CA-2). Pursuant to 40 CFR 63.2435(b), a miscellaneous organic chemical manufacturing process unit (MCPU) includes equipment necessary to operate a miscellaneous organic chemical manufacturing process, as defined in 40 CFR 63.2550, that satisfies all of the conditions specified in 40 CFR 63.2435 (b)(1) through (3). According to 40 CFR 63.2435 (b)(1), the MCPU must produce material or family of materials that is described in 40 CFR 63.2435 (b)(1)(i), (ii), (iii), (iv), or (v). Pursuant to 40 CFR 63.2435(c)(5), production activities described using the 1997 version of NAICS codes 325181 are exempt as specified in 40 CFR 63.2435(b)(1)(i) and (ii), and therefore are not subject to the requirements of 40 CFR 63, Subpart FFFF.

40 CFR 61 Subpart V, *National Emission Standard for Equipment Leaks (Fugitive Emission Sources)* is not applicable to EU #018 (EPN FUG-CA-1) and EU #020 (EPN FUG-CA-2). The provisions of 40 CFR 61 Subpart V apply to the sources listed in 40 CFR 61.240(a) after the date of promulgation of a specific subpart in part 61 [40 CFR 61.240(b)]. There are no other regulations that apply to EPN FUG-CA-1 and EPN FUG-CA-2 which specifically refer to 40 CFR 61 Subpart V.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

CHLOR-ALKALI PLANT:

EU# 018 (EPN FUG-CA-1) Chlor-alkali plant Cl_2/HCl Fugitives
EU# 020 (EPN FUG-CA-2) Chlor-alkali Plant Fugitives

NON-APPLICABLE REGULATIONS (CONTINUED):
40 CFR 60 Subpart VV, *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry*, is not applicable to EU #018 (EPN FUG-CA-1) and EU #020 (EPN FUG-CA-2). 40 CFR 60 Subpart VV applies to facilities with process units, components assembled to produce, as intermediate or final products, one or more of the chemicals listed in 40 CFR 60.489. The Chlor-Alkali Plant produces chlorine, sodium hydroxide, hydrochloric acid, and hydrogen gas: none of which are listed in 40 CFR 60.489. The Chlor Alkali Plant Fugitives (EPN FUG CA-2) does emit carbon tetrachloride as a pollutant. However, the carbon tetrachloride is neither produced, nor used as an intermediate. It is a processing aid brought in from outside suppliers. Therefore, 40 CFR 60 Subpart VV does not apply to the Chlor-Alkali Fugitive Emissions.

1. **Operating Limitations:**
   Control of Potentially Hazardous Matter and Toxic Substances: Persons responsible for a source from which hazardous matter or toxic substances may be emitted shall provide the utmost care and consideration, in the handling of these materials, to the potentially harmful effects of the emissions resulting from such activities. No owner or operator shall allow any affected facility to emit potentially hazardous matter or toxic substances in such quantities or duration as to be harmful to the health and welfare of humans, animals and plants [401 KAR 63:020].

   Compliance Demonstration Method:
   Refer to Section F.9 for compliance certification.

2. **Emission Limitations:**
   None

3. **Testing Requirements:**
   None

4. **Specific Monitoring Requirements:**
   None

5. **Specific Recordkeeping Requirements:**
   None

6. **Specific Reporting Requirements:**
   None

7. **Specific Control Equipment Operating Conditions:**
   None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

ETHYLENE PLANT:

EU# 005 (EPN 305-311) Seven (7) Propane Cracking Furnaces
Rating: 60.0 mmBtu/hr each
Primary Fuel: Process fuel gas *
Date of construction: 1963 (EPN 305- 310)
Date of construction: 1967 (EPN 311)
Control Device: None

EU# 006 (EPN 327-328) Two (2) Propane Cracking Furnaces
Rating: 127.0 mmBtu/hr each
Fuel: Process fuel gas *
Date of construction: 1976
Control Device: None

* Process fuel gas includes natural gas, ethylene plant fuel gas, hydrogen, propane and mixtures thereof.

APPLICABLE REGULATIONS:

401 KAR 63:002, which incorporates by reference federal regulations 40 CFR 63 Subpart YY. The Cracking furnaces are part of the affected source pursuant to 40 CFR 63.1103(e)(1)(ii)(J), but there are no applicable requirements in 40 CFR 63 Subpart YY.

401 KAR 59:015, *New Indirect Heat Exchangers,* applies to EU #006 (EPN 327 and EPN 328).
401 KAR 61:015, *Existing Indirect Heat Exchangers,* applies to EU# 005 (EPN 305-311).

1. Operating Limitations: None

2. Emission Limitations:

a. Emissions of particulate matter from EU# 006 (EPN 327 & 328) shall not exceed 0.1 lb/mmBtu [401 KAR 59:015, Section 4(1)(b)].
b. Emissions of sulfur dioxide from EU# 006 (EPN 327 & 328) shall not exceed 0.8 lb/mmBtu [401 KAR 59:015, Section 5(1)(b)].
c. Emissions of particulate matter from EU# 005 (EPN 305-311) shall not exceed 0.17 lb/mmBtu [401 KAR 61:015 Section 4].
d. Emissions of sulfur dioxide from EU# 005 (EPN 305-311) shall not exceed 4.0 lb/mmBtu [401 KAR 61:015 Section 5].

Visible Emission Limits:

a. For any fuel used, the opacity of visible emissions from EU# 006 (EPN 327 & 328) shall not exceed 20 percent [401 KAR 59:015, Section 4(2)] except as provided below:
   (1) Pursuant to 401 KAR 59:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

ETHYLENE PLANT:

EU# 005	(EPN 305-311)	Seven (7) Propane Cracking Furnaces
EU# 006	(EPN 327-328)	Two (2) Propane Cracking Furnaces

Visible Emission Limits (Continued):

(2) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

b. The opacity of visible emissions from EU# 005 (EPN 305-311) shall not exceed 20 percent [401 KAR 61:015, Section 4].

Compliance Demonstration Method:
Compliance with the particulate matter limit (lb/mmBtu), the sulfur dioxide limit (lb/mmBtu), and the opacity limit is demonstrated while burning process fuel gas.

3. Testing Requirements:
For EU# 006 (EPN 327 & 328), pursuant to 401 KAR 59:015, Section 8, the reference methods in Appendix A of 40 CFR 60 except as provided in 401 KAR 50:045 shall be used to determine compliance with standards as prescribed in Section 4, 5, and 6 of 401 KAR 59:015. Testing is only required when requested by the Division or otherwise indicated by the permit and/or applicable regulation.

4. Specific Monitoring Requirements:
For EU# 005 (EPN 305-311), the rate of fuel burned of fuel burned shall be measured daily or at shorter intervals and recorded. The heating value and ash content of the fuel shall be ascertained at least once per week and recorded. [401 KAR 61:015 Section 6 (3)]. Compliance with 401 KAR 61:015 can be demonstrated by monthly measurements and records of fuel burned.

5. Specific Recordkeeping Requirements:
a. For EU# 006 (EPN 327 & 328), the permittee shall maintain records of the monthly consumption of process fuel gas used in the cracking furnaces.
b. For EU# 005 (EPN 305-311), Refer to **4. Specific Monitoring Requirements.**

6. Specific Reporting Requirements:
None

7. Specific Control Equipment Operating Conditions:
None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

ETHYLENE PLANT:

EU# 021 (EPN 318)

Methanol Tank (TK-932)
Fixed Roof
Date of construction: 1963
3,000 gallons capacity (11.36 m^3)
Maximum true vapor pressure of total organic HAP: 15.789 kilopascals (kPa)

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulations 40 CFR 63 Subpart YY, *National emission standard for ethylene manufacturing*, applies to storage tank TK-932.

1. **Operating Limitations:**
   The vessel shall be filled through a submerged fill pipe [40 CFR 63.1103(e)(3)(a)(1)].

   Compliance Demonstration Method:
   Refer to Section F.9 for compliance reporting.

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

ETHYLENE PLANT:

* (EPN 332A) Fuel Oil Storage Tank
495,000 gallons capacity
Date of Construction: 1966
True vapor pressure of organic HAP < 3.4kPa

* (EPN 332B) Fuel Oil Storage Tank
96,000 gallons capacity
Date of Construction: 1966
True vapor pressure of organic HAP < 3.4kPa

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulations 40 CFR 63 Subpart YY, *National emission standard for ethylene manufacturing*, applies to storage tanks 332A & 332B. Pursuant to 40 CFR 63.1103(e)(1)(i)(A), 40 CFR 63 Subpart YY is applicable, but there are no applicable requirements in 40 CFR 63.1103 Table 7, due to tank size and vapor pressure of contents.

*Aside from 40 CFR 63 Subpart YY *National emission standard for ethylene manufacturing, applicability*, EPN 332A & 332B are considered insignificant activities. No emission unit number (EU#) has been assigned to these storage tanks within the emissions inventory database.

1. **Operating Limitations:** None

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:** None

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

ETHYLENE PLANT:

EU# 022 (EPN 319) Gasoline Storage Tank (TK 904A):
259, 308 gallon capacity
Maximum true vapor pressure: 12.13 kilopascal
Internal Floating Roof
Date of construction: 1963

EU# 022 (EPN 320) Gasoline Storage Tank (TK 904B):
259, 308 gallon capacity
Maximum true vapor pressure: 12.13 kilopascal
Internal Floating Roof
Date of construction: 1963

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulations 40 CFR 63 Subparts WW & YY, *National emission standard for the ethylene manufacturing,* applies to storage tanks TK-904A and TK-904B.

1. **Operating Limitations:**
   a. The permittee shall comply with the requirements of 40 CFR 63 Subpart WW [40 CFR 63.1103(e)(3)(b)(1)(i)].
   b. The tank shall be equipped with an Internal Floating Roof (IFR) [40 CFR 63.1062(a)(1)].
   c. The tank shall be equipped with liquid-mounted seal, mechanical shoe seal, or two seals mounted one of the above the other (lower seal may be vapor mounted) [40 CFR 63.1063(a)(1)(i)].
   d. If the IFR is equipped with a vapor-mounted seal as of the proposal date of 40 CFR 63 Subpart YY, the vessel is not required to meet the seal requirements of 63.1063(a)(1)(i) until the next time the storage vessel is completely emptied and degassed, or 10 years after the promulgation of 40 CFR 63 Subpart YY [40 CFR 63. 1063(a)(1)(i)(D)].
   e. Openings through the deck of the floating roof shall be equipped as specified in 40 CFR 63.1063(a)(2) [40 CFR 63.1063(a)(2)].

   Compliance Demonstration Method:
   For compliance, refer to Section F.9 for compliance reporting, **4. Specific Monitoring Requirements** and **6. Specific Reporting Requirements.**

2. **Emission Limitations:** None

3. **Testing Requirements:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

ETHYLENE PLANT:

EU# 022 (EPN 319) Gasoline Storage Tank (TK 904A)

EU# 022 (EPN 320) Gasoline Storage Tank (TK 904B)

4. Specific Monitoring Requirements:

The permittee shall perform visual inspections of the roof, seals, gaskets, slotted membranes, and sleeve seals (if any) according to 40 CFR 63.1063(c)(1). A record of the each inspection shall be kept with any deficiencies noted and proper maintenance shall be performed [40 CFR 63.1063(c)(1)].

5. Specific Recordkeeping Requirements:

The permittee shall keep records of the following information:

a. Vessel dimensions and capacity for as long as the liquid is stored [40 CFR 63.1065(a)].
b. All visual inspections performed under 40 CFR 63.1063(c)(1). Deficiencies shall be noted [40 CFR 63.1065(b)].
c. Each time roof is landed on its support legs [40CFR 63.1065(c)].
d. Each extension of the repair used under 40 CFR 63.1064(e)(2) [40 CFR 63.1065(d)].

6. Specific Reporting Requirements:

The permittee shall report the following information:

a. Periodic Reports as required by 40 CFR 63.1110(e), including the results of each inspection conducted in accordance with 63.1063(c)(1) in which a failure [as defined by 63.1063(d)] is detected in the control equipment [40 CFR 63.1066(b)].
b. The permittee shall notify the Division in writing at least 30 calendar days prior to inspecting an empty tank from within the tank under 40 CFR 63.1063(d)(1). If the inspection is not planned and the permittee could have known about the inspection 30 calendar days in advance, the permittee shall notify the Division at least 7 calendar days prior to the inspection [40 CFR 63.1066(b)(1)].

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

ETHYLENE PLANT:

EU# 007	(EPN 321)	Ethylene Flare
	Type:	John Zink, continuously operated, steam assisted
	Auxiliary Fuel:	Process Fuel Gas and/or Natural Gas
	Rating:	5,750 mmBtu/hr
	Date of Construction:	1991 (new flare tip in 2001)

Description - The Ethylene Plant flare is used to burn hydrocarbon streams from Westlake CA&O's, Ethylene plant, and the contiguous Cymetech plant. The flare routinely burns excess plant process gas, tank car, barge, and tank truck loading/unloading venting and hose purges, transfer line purges, and vents from various tanks in the plant. It also burns relief valve venting and equipment venting during maintenance/ emergency shutdowns of the Ethylene plant.

APPLICABLE REGULATIONS:

a. 401 KAR 63:015, *Flares*, applies to the Ethylene Flare.
b. 401 KAR 60:005, which incorporates by reference federal regulation 40 CFR 60 Subpart NNN, *Standards of performance for VOC emissions from synthetic organic chemicals manufacturing industry distillation operations*, applies to the distillation columns in the Cymetech plant which are vented to the Ethylene Flare.
c. 401 KAR 63:002, which incorporates by reference 40 CFR 63 Subpart A (General Provisions), SS (National emission standards for Closed Vent Systems, Control Devices, Recovery Devices, and Routing to a Fuel Gas System), and YY (National emission standard for Hazardous Air Pollutants for Source Categories: Generic Maximum Achievable Control Technology Standards), National emission standard for ethylene manufacturing, applies to the ethylene flare.

1. Operating Limitations:

a. The permittee shall operate the flare with a flame present at all times when vents are being sent to flare [40 CFR 60.18(c)(2)] & [40 CFR 60.11(b)(5)].
b. The permittee shall operate the flare with a minimum net heating value of the gas being combusted of 11.2 megajoules per standard cubic meter (MJ/scm) (300 Btu/scf). The net heating value of the gas shall be determined by the methods specified in 40 CFR 60.18(f)(3) [40 CFR 60.18(c)(2)(ii)] and 40 CFR 63.11(b)(6)(ii) [40 CFR 63.11(b)(6)(ii)].
c. The permittee shall operate the flare with an exit velocity in compliance with 40 CFR 60.18 (c)(4) and 63.11(b)(7).
d. The flare shall meet performance requirements of 40 CFR 63.11(b) [40 CFR 63.982(b), 63.987(a)].

Compliance Demonstration Method:

Pursuant to 40 CFR 63 Subpart SS, the flare was tested on March 15, 2007, which met standards for testing under 40 CFR 63.11(b). Refer to Section F.9 for compliance reporting, **and 4. Specific Monitoring Requirements.**

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

ETHYLENE PLANT:

EU# 007 (EPN 321) Ethylene Flare

2. Emission Limitations:

a. Visible emissions from the ethylene flare shall not exceed twenty (20) percent opacity for more than three (3) minutes in any one (1) day [401 KAR 63:015, Section 3].

b. The permittee shall reduce organic Hazardous Air Pollutant (HAP) emissions by 98 weight percent; or reduce organic HAP or TOC to a concentration of 20 parts per million by volume; whichever is less stringent, by venting through a closed vent system and control device complying with 40 CFR 63.982(b) and (c)(2)[40 CFR 63.1103(e)(3)(d)(1)(i)].

Compliance Demonstration Method:

a. Compliance with the flare standards contained in 40 CFR 60.18 (c) through (f) shall be deemed compliance with the visible emissions standard in 401 KAR 63:015. Refer to subsection **1. Operating Limitations.**

b. [40 CFR 63.982 (b)] – Closed vent system and flare. Owners or operators that vent emissions through a closed vent system to a flare shall meet the requirements in 40 CFR 63.983 for closed vent systems. 40 CFR 63.987 for flares; 40 CFR 63.997 (a), (b), and (c) for provisions regarding flare compliance assessments; the monitoring, recordkeeping, and reporting requirements of 40 CFR 63.998 and 40 CFR 63.999. No other provisions of 40 CFR 63 Subpart SS apply to emissions vented through a closed vent system to a flare.

3. Testing Requirements:

Compliance assessment tests shall be conducted according to the methods specified in 40 CFR 63.987(b) [40 CFR 63.987(b)].

Compliance Demonstration Method:

The ethylene flare was last tested on March 15, 2007, and met the operating conditions in subsection **1. Operating Limitations**, which met the standards for testing under 40 CFR 63.11(b).

4. Specific Monitoring Requirements:

a. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device [40 CFR 63.11(b)(5)].

b. The permittee shall install and maintain a device capable of continuously detecting that at least one pilot flame or the flare flame is present [40 CFR 63.987(c)].

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the following:

a. Maintain records of routine and non-routine maintenance activities performed at the flare.

b. Flare compliance including design documentation and compliance assessment testing [40 CFR 63.998(a)(1)(A)].

c. Hourly records of pilot flame monitoring results [40 CFR 63.998(a)(1)(B)].

d. Periods when the pilot flame is not present or the monitor is not operating [40 CFR

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

63.998(a)(1)(C)].

ETHYLENE PLANT:

EU# 007 (EPN 321) Ethylene Flare

6. Specific Reporting Requirements:

The permittee shall report the following information:

a. The permittee shall notify the Division in writing at least 30 days prior to conducting a compliance assessment test [40 CFR 63.999(a)(1)(i)].
b. An application to substitute a prior compliance assessment for an initial compliance assessment shall be submitted at least 90 days before the compliance test is required [40 CFR 63.999(a)(1)(iv)].
c. Flare compliance assessment test report [40 CFR 63.999(a)(2)].
d. Periodic reports including all periods when the pilot/flare flame was absent [40 CFR 63.999(c)].

7. Specific Control Equipment Operating Conditions:

The permittee shall comply with 40 CFR 60.18 (c)-(f).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

EU# 025 (EPN FUG-ETH-YY) Ethylene Plant Fugitives Subject to MACT YY

The following is an approximate count of the total pipeline equipment at the ethylene plant subject to MACT YY. The pipeline equipment at the emission point listed above is included in this total.

15,812	Flanges/connectors	1,037	Gas/Vapor Valves
26	Pumps	2	Compressors
1,329	Light Liquid Valves		

NOTE - The pipeline equipment count listed above reflects an accurate count of the equipment as of the date of issuance of this permit but is not intended to limit the permittee to the exact numbers specified. The permittee may add or remove pipeline equipment without a permit revision as long as the equipment continues to comply with the applicable requirements listed below.

APPLICABLE REGULATIONS:

401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart UU & YY, *National emission standard for ethylene manufacturing*, applies to the Ethylene Plant Fugitive Unit.

40 CFR 63 Subpart UU *National emission standard for equipment leaks- Control level 2 Standards* (Referenced by 40 CFR 63 Subpart YY)

40 CFR 63 Subpart YY *National emission standard for hazardous air pollutants for source categories- Generic maximum achievable control technology standards.* Pursuant to 40 CFR 63.1103(e)(3)(f)(1), the permittee shall comply with the requirements of 40 CFR 63 Subpart UU, for the emission unit.

*40 CFR 61 Subpart J, *National emission standard for equipment leaks (fugitive emission sources) of benzene.* Pursuant to 40 CFR 61.112 (a), each owner or operator subject to the provisions of 40 CFR 61 Subpart J, shall comply with the requirements of 40 CFR 61 Subpart V. 40 CFR 61 Subpart V *National emission standard for equipment leaks (fugitive emission sources)* – is applicable only to equipment "in Benzene Service" as defined in 40 CFR 61.111 [40 CFR 61.112(b)].

*NOTE – Pursuant to 40 CFR 63.1100(g)(4), equipment that must be controlled by 40 CFR 63 Subpart YY and 40 CFR 61 Subpart J or 40 CFR 61 Subpart V, is required only to comply with the equipment leak requirements of 40 CFR 63 Subpart YY, which references 40 CFR Subpart UU.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

EU# 025 (EPN FUG-ETH-YY) Ethylene Plant Fugitives Subject to MACT YY

1. Operating Limitations:

For the pipeline equipment in organic HAP service, the permittee shall comply with the requirements of 40 CFR 63 Subpart UU [40 CFR 63.1103(e)(3)(f)(1)].

Compliance Demonstration Method:

For compliance, refer to Subsection 2 through 6, below. Refer to F.9 for compliance reporting and **5. Specific Recordkeeping Requirements** and **6. Specific Reporting Requirements.**

2. Emission Limitations:

The permittee shall comply with the provisions of 40 CFR 63 Subpart UU as they apply to each of the following sources that are intended to operate in organic HAP service:

a. For valves in gas/vapor/light liquid service, in accordance with 40 CFR 63.1025.
b. For pumps in light liquid service, in accordance with 40 CFR 63.1026.
c. For connectors in gas/vapor/light liquid service, in accordance with 40 CFR 63.1027.
d. For agitators in gas/vapor/light liquid service, in accordance with 40 CFR 63.1028.
e. For pumps, valves, connectors, and agitators in heavy liquid service; pressure relief devices in liquid service; and instrumentation systems; in accordance with 40 CFR 63.1029.
f. For pressure relief devices in gas/vapor service, in accordance with 40 CFR 63.1030.
g. For compressors, in accordance with 40 CFR 63.1031.
h. For sampling connection systems, in accordance with 40 CFR 63.1032.
i. For open-ended valves or lines, in accordance with 40 CFR 63.1033.
j. For closed vent systems, control devices, or emissions routed to fuel gas/process; in accordance with 40 CFR 63.1034.

Compliance Demonstration Method:

For compliance, refer to F.9 for compliance reporting and **5. Specific Recordkeeping Requirements** and **6. Specific Reporting Requirements.**

3. Testing Requirements:

The leak detection and repair (LDAR) program shall comply with the test methods and procedures described in 40 CFR 63.1023.

4. Specific Monitoring Requirements:

Refer to **2. Emission Limitations** and **3. Testing Requirements.**

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

EU# 025 (EPN FUG-ETH-YY) Ethylene Plant Fugitives Subject to MACT YY

5. Specific Recordkeeping Requirements:

a. For the equipment in organic HAP service, the permittee shall comply with the recordkeeping requirements described in 40 CFR 63.1038.

b. The permittee may comply with the recordkeeping requirements for the sources listed in 40 CFR 63.1025 thru 63.1034 in one recordkeeping system if the system identifies each record by process unit and the program being implemented (e.g., quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.1038 shall be maintained in a manner that can be readily accessed at the plant site.

c. For visual inspections, the permittee shall document that the inspection was conducted and the date of the inspection.

d. When a leak is detected, the information specified in 40 CFR 63.1038(c) shall be recorded.

6. Specific Reporting Requirements:

In accordance with 40 CFR 63.1039(b), for the organic HAP leak detection system, the permittee shall submit semi-annual periodic reports that include the following:

a. A summary of the number of leaks detected, the number of leaks that were not repaired as required by 40 CFR 63.1024, and the specified additional information for the following equipment types:
   i. Valves monitored under 40 CFR 63.1025, including percent leaks and total valves monitored.
   ii. Pumps monitored under 40 CFR 63.1026, including percent leaks and total pumps monitored.
   iii. Connectors monitored under 40 CFR 63.1027, including percent leaks and total connectors monitored.
   iv. Agitators monitored under 40 CFR 63.1026.
   v. Compressors monitored under 40 CFR 63.1031.

b. Occurrence and number of delay of repair instances pursuant to 63.1024(d).

c. The results of all performance tests and monitoring conducted to determine compliance with no detectable emissions under 40 CFR 63.1030(b) and 63.1031(f) during the semi-annual reporting period.

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

Description - The wastewater pre-treatment plant receives and treats wastewater from various processes within the Ethylene Plant in order to remove benzene from the wastewater prior to discharge to the facility-wide secondary wastewater treatment plant. Vents from this system are controlled by either #8 & #9 furnaces (EPN# 327 & 328) or by the Ethylene Flare (EPN# 321). The wastewater pre-treatment plant consists of approximately 644 valves, 8 relief valves, 124 open-end valves, 1936 flanges, 9 pumps and the following tanks:

NOTE - The pipeline equipment count listed above reflects an accurate count of the equipment as of the date of issuance of this permit but is not intended to limit the permittee to the exact numbers specified. The permittee may add or remove pipeline equipment without a permit revision as long as the equipment continues to comply with the applicable requirements listed below.

TK-191 Equalization Tank (14,000 gals.)
TK-192A CPI Oil/Water Separator (11,800 gals.)
TK-192B CPI Oil/Water Separator (11,800 gals.)
TK-194A ISF Unit (3,100 gals.)
TK-194B ISF Unit (3,100 gals.)
TK-194C ISF Unit (3,100 gals.)
TK-195 Recovered Oil Tank (4,000 gals.)
TK-196 Oil Transfer Tank (2,000 gals.)
TK-198A Caustic Neutralization Tank (7,000 gals.)
TK-198B Caustic Neutralization Tank (7,000 gals.)
TK-201 Knockout Tank (1,000 gals.)
TK-202 Slop Oil Tank (1,000 gals.)
TK-211 Contaminated Water Collection Tank (650 gals.)
Construction commenced: 1992.

(FF-1) Plant-wide Uncontrolled Benzene Emissions

Description – (FF-1) includes various waste streams in the facility that are uncontrolled for benzene emissions.

APPLICABLE REGULATIONS:

a. 401 KAR 59:095, *New oil-effluent water separators*, applies to the following emission points: TK-192A; TK-192B; TK-194A; TK-194B; and TK-194C.
b. 401 KAR 60:005, which incorporates by reference federal regulation 40 CFR 60 Subpart Kb, *Standards of performance for volatile organic liquid storage vessels*, applies to tank - TK-191.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

APPLICABLE REGULATIONS (CONTINUED):

c. 40 CFR 61 Subpart FF, *National emission standard for benzene waste operations*, is applicable to the Ethylene Wastewater Pre-treatment Plant; including tanks – TK191, TK-195, TK-196, TK-198A, TK-198B, TK-201, Tk-202, and TK-211 and oil water separators TK-192A, TK-192B, TK-194A, TK-194B, and TK194-C, by reference from 40 CFR 63.1091 (40 CFR 63 Subpart XX).

d. 40 CFR 63 Subparts XX, *National emission standard for ethylene manufacturing*, process units: heat exchange systems and waste operations, applies to the Ethylene Wastewater Pre-treatment Plant by reference in 40 CFR 63 Subpart YY [40 CFR 63.1103(e)(3)(g)(1)(i)].

e. 401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart YY, National emission standards for hazardous air pollutants for source categories: generic maximum achievable control technology standards applies to the Ethylene Wastewater Treatment Plant.

1. Operating Limitations:

a. Pursuant to 40 CFR 63 Subpart YY [40 CFR 63.1103(e)(3)(g)(1)(i)], the permittee shall comply with the waste stream requirements of 40 CFR 63 Subpart XX.

b. Pursuant to 40 CFR 63 Subpart XX [40 CFR 63.1091], the permittee shall comply with 40 CFR 61, Subpart FF, National Emission Standards for Benzene Operations.

c. For TK-191, TK-195, TK-196, TK-198A, TK-198B, TK-201, TK-202, and TK-211:

(1) Install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the tank to the control device [40 CFR 61.343(a)(1)].

(2) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the tank except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair [40 CFR 61.343(a)(1)(i)(B)].

(3) Except as provided in 40 CFR 61.350, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than 45 calendar days after identification [40 CFR 61.343(d)].

d. For TK-192A, TK-192B, TK-194A, TK-194B, and TK-194C;

(1) Install, operate, and maintain a fixed-roof and closed-vent system that routes all organic vapors vented from the oil-water separator to the control device [40 CFR 61.347(a)(1)].

(2) Each opening shall be maintained in a closed, sealed position (e.g., covered by a lid that is gasketed and latched) at all times that waste is in the oil-water separator except when it is necessary to use the opening for waste sampling or removal, or for equipment inspection, maintenance, or repair [40 CFR 61.347(a)(1)(i)(B)]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

1. Operating Limitations (Continued):

(3) Except as provided in 40 CFR 61.350, when a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification [40 CFR 61.347(C)].

e. For TK-192 A&B and TK-194 A, B, and C; each of these vessels shall be equipped with a closed vent system and a control device. All gauging and sampling devices shall be gas-tight except when gauging and sampling are performed [401 KAR 59:095, Section 3].

f. Any fuel gas from any of the waste management/treatment units that is routed to a fuel gas system (as defined in 40 CFR 61.341) is exempt from 40 CFR 61 Subpart FF. There are no monitoring, testing, recordkeeping, or reporting requirements, under 40 CFR 61 Subpart FF [40 CFR 61.340(d)].

g. Pursuant to 40 CFR 61.348(e) except as specified in 40 CFR 61.348(e)(3), if the treatment process or wastewater treatment system unit has any openings (e.g., access doors, hatches, etc.), all such openings shall be sealed (e.g., gasketed, latched, etc.) and kept closed at all times when waste is being treated, except during inspection and maintenance.

(1) Each seal, access door, and all other openings shall be checked by visual inspections initially and quarterly thereafter to ensure that no cracks or gaps occur and that openings are closed and gasketed properly.

(2) Except as provided in 40 CFR 61.350, when a broken seal or gasket or other problem is identified, first efforts at repair shall be made as soon as practicable, but not later than 15 calendar days after identification.

(3) If the cover and closed-vent system operate such that the treatment process and wastewater treatment system unit are maintained at a pressure less than atmospheric pressure, the owner or operator may operate the system with an opening that is not sealed and kept closed at all times if the following conditions are met:

(i) The purpose of the opening is to provide dilution air to reduce the explosion hazard;

(ii) The opening is designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 40 CFR 61.355(h); and

(iii) The pressure is monitored continuously to ensure that the pressure in the treatment process and wastewater treatment system unit remain below atmospheric pressure.

h. Each closed-vent system and control device used to comply with standards in accordance with 40 CFR 61.343 through 61.348 of 40 CFR 61 Subpart FF, the owner or operator shall properly design, install, operate, and maintain the closed-vent system and control device in accordance with the following requirements [40 CFR 61.349(a)]:

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

1. Operating Limitations (Continued):

(1) Vent systems that contain any bypass line that could divert the vent stream away from a control device used to comply with the provisions 40 CFR 61 Subpart FF shall install, maintain, and operate according to the manufacturer's specifications a flow indicator that provides a record of vent stream flow away from the control device at least once every 15 minutes, except as provided in 40 CFR 61.349(a)(1)(ii)(B) [40 CFR 61.349(a)(1)(ii)].

(2) All gauging and sampling devices shall be gas-tight except when gauging or sampling is taking place [40 CFR 61.349(a)(1)(iii)].

(3) For each closed-vent system complying with 40 CFR 61.349(a), one or more devices which vent directly to the atmosphere may be used on the closed-vent system provided each device remains in a closed, sealed position during normal operations except when the device needs to open to prevent physical damage or permanent deformation of the closed-vent system resulting from malfunction of the unit in accordance with good engineering and safety practices for handling flammable, explosive, or other hazardous materials [40 CFR 61.349(a)(1)(iv)].

(4) The control device shall be designed and operated in accordance with one the following conditions, (i) or (ii) [40 CFR 61.349(a)(2)].

(i) A control device other than those described in 40 CFR 61.349 (a)(2)(i) through (iii) may be used provided that the following conditions are met [40 CFR 61.349(a)(2)(iv)]:

(A) The device shall recover or control the organic emissions vented to it with an efficiency of 95 weight percent or greater, or shall recover or control the benzene emissions vented to it with an efficiency of 98 weight percent or greater.

(B) The owner or operator shall develop test data and design information that documents the control device will achieve an emission control efficiency of either 95 percent or greater for organic compounds or 98 percent or greater for benzene.

(C) The owner or operator shall identify:

(*1*) The critical operating parameters that affect the emission control performance of the device;

(*2*) The range of values of these operating parameters that ensure the emission control efficiency specified in 40 CFR 61.349 (a)(2)(iv)(A) is maintained during operation of the device; and

(3) How these operating parameters will be monitored to ensure the proper operation and maintenance of the device.

(ii) A flare shall comply with the requirements of 40 CFR 60.18 [40 CFR 61.349(a)(2)(iii)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

1. Operating Limitations (Continued):

(5) Each closed-vent system and control device used to comply with 40 CFR 61 Subpart FF shall be operated at all times when waste is placed in the waste management unit vented to the control device except when maintenance or repair of the waste management unit cannot be completed without a shutdown of the control device [40 CFR 61.349(b)].

i. Except as provided in 40 CFR 61.350, if visible defects are observed during an inspection, or if other problems are identified, or if detectable emissions are measured, a first effort to repair the closed-vent system and control device shall be made as soon as practicable but no later than 5 calendar days after detection. Repair shall be completed no later than 15 calendar days after the emissions are detected or the visible defect is observed [40 CFR 61.349(g)].

Compliance Demonstration Method:

a. Pursuant to 40 CFR 61.349(c), an owner and operator shall demonstrate that each control device, except for a flare, achieves the appropriate conditions specified in 40 CFR 61.349 (a)(2) by using one of the following methods:
   (1) Engineering calculations in accordance with requirements specified in 40 CFR 61.356(f); or
   (2) Performance tests conducted using the test methods and procedures that meet the requirements specified in 40 CFR 61.355.
b. Pursuant to 40 CFR 61.349(d), an owner or operator shall demonstrate compliance of each flare in accordance with paragraph 40 CFR 61.349 (a)(2)(iii).

2. Emission Limitations:

a. Each owner or operator of a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr) as determined in 40 CFR 61.342 (a) shall be in compliance with the requirements 40 CFR 61.342 (c) through (h) [40 CFR 61.342(b)].
b. Pursuant to 40 CFR 61.342(e), as an alternative to the requirements specified in paragraphs 40 CFR 61.342 (c) and (d), an owner or operator of a facility at which the total annual benzene quantity from facility waste is equal to or greater than 10 Mg/yr (11 ton/yr) as determined in 40 CFR 61.342(a) may elect to manage and treat the facility waste as follows:
   (1) The owner or operator shall manage and treat facility waste with a flow-weighted annual average water content of less than 10 percent in accordance with the requirements of in 40 CFR 61.342 (c)(1). [40 CFR 61.342(e)(1)]
      (i) Remove or destroy the benzene contained in the waste using a treatment process or wastewater treatment system that complies with the standards specified in 40 CFR 61.348.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

2. Emission Limitations (Continued):

A. 40 CFR 61.348 (a)(3) - The intentional or unintentional reduction in the benzene concentration of a waste stream by dilution of the waste stream with other wastes or materials is not allowed.

B. 40 CFR 61.348 (a)(4) - The permittee may aggregate or mix together individual waste streams to create a combined waste stream for the purpose of facilitating treatment of waste to comply with the requirements of 40 CFR 61.348(a)(1) except as provided in 40 CFR 61.348 (a)(5).

(ii) Comply with the standards specified in 40 CFR 61.343 through 61.347 for each waste management unit that receives or manages the waste stream prior to and during treatment of the waste stream in accordance with 40 CFR 61.342 (c)(1)(i).

(iii)Each waste management unit used to manage or treat waste streams that will be recycled to a process shall comply with the standards specified in 40 CFR 61.343 through 61.347. Once the waste stream is recycled to a process, including to a tank used for the storage of production process feed, product, or product intermediates, unless this tank is used primarily for the storage of wastes, the material is no longer subject to 40 CFR 61.342 (c).

(2) The owner or operator shall manage and treat facility waste [(including remediation and process unit turnaround waste) with a flow-weighted annual average water content of 10 percent or greater, on a volume basis as total water, and each waste stream that is mixed with water or wastes at any time such that the resulting mixture has an annual water content greater than 10 percent] so that the benzene quantity for the wastes must be equal to or less than 6.0 Mg/yr (6.6 ton/yr) as determined in 40 CFR 61.355(k).

c. For TK-192 A&B and TK-194 A, B, and C - Each of these vessels shall be equipped with a closed vent system and a control device. All gauging and sampling devices shall be gas-tight except when gauging and sampling are performed [401 KAR 59:095, Section 3].

Compliance Demonstration Method:

a. Compliance with 40 CFR 61 Subpart FF will be determined by review of the facility records and results from tests and inspections using the methods and procedures specified in 40 CFR 61.355 [40 CFR 61.342(g)].

b. For TK-192A, TK-192B, TK-194A, TK-194B, and TK-194C- The permittee shall conduct visual inspection of each roof, seal, access door, and all other openings initially and quarterly thereafter [40 CFR 61.347(b)]. When a broken seal or gasket or other problem is identified, or when detectable emissions are measured, first efforts at repair shall be made within 15 days after identification [40 CFR 61.347(c)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

Compliance Demonstration Method (Continued):

c. Pursuant to 40 CFR 61.355(k)(4), the benzene in waste entering an enhanced biodegradation unit, as defined in 40 CFR 61.348(b)(2)(ii)(B), shall not be included in the determination of benzene quantity, determined in paragraph (k)(6) of 40CFR 61.355, if the following conditions are met:
   (i) The benzene concentration for each waste stream entering the enhanced biodegradation unit is less than 10 ppmw on a flow-weighted annual average basis, and
   (ii) All prior waste management units managing the waste comply with 40 CFR 61.343, 61.344, 61.345, 61.346, 61.347 and 61.348(a).

   Refer to EU#028 (EPN EE-5) Activated Sludge Biotreatment System/Secondary Wastewater Treatment System for emission limitations.

3. Testing Requirements:

Pursuant to 40 CFR 61.343 (a)(1)(i)(A) standards for tanks and 40 CFR 61.347(a)(1)(i)(A) standards for oil/water separators, the cover and all openings (e.g., access hatches, sampling ports, and gauge wells) shall be designed to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 40 CFR 61.355(h).

4. Specific Monitoring Requirements:

a. Except for a treatment process or waste stream complying with 40 CFR 61.348(d), the owner or operator shall monitor each treatment process or wastewater treatment system unit to ensure the unit is properly operated and maintained by one of the following monitoring procedures [40 CFR 61.354 (a)]:
   (1) Measure the benzene concentration of the waste stream exiting the treatment process complying with 40 CFR 61.348(a)(1)(i) at least once per month by collecting and analyzing one or more samples using the procedures specified in 40 CFR 61.355(c)(3) [40 CFR 61.354 (a)(1)].
   (2) Install, calibrate, operate, and maintain according to manufacturer's specifications equipment to continuously monitor and record a process parameter (or parameters) for the treatment process or wastewater treatment system unit that indicates proper system operation. The owner or operator shall inspect at least once each operating day the data recorded by the monitoring equipment (e.g., temperature monitor or flow indicator) to ensure that the unit is operating properly [40 CFR 61.354 (a)(2)].

b. For TK-191, TK-195, TK-196, TK-198A, TK-198B, TK-201, TK-202, and TK-211, each fixed-roof, seal, access door, and all other openings shall be checked by visual inspection initially and quarterly thereafter to ensure that no cracks or gaps occur and that access doors and other openings are closed and gasketed properly [40 CFR 63.343(c)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

4. Specific Monitoring Requirements (Continued):

c. For TK-192A, TK192B, TK-194A, TK-194B, and TK-194C, each cover seal, access hatch, and all other openings shall be checked by visual inspection initially and quarterly thereafter to ensure that no cracks or gaps occur between the cover and oil-water separator wall and that access hatches and other openings are closed and gasketed properly [40 CFR 61.347(b)].

d. For each closed-vent system and control device used to comply with standards in accordance with 40 CFR61.343 through 61, the owner or operator shall properly design, install, operate, and maintain the closed-vent system and control device to operate with no detectable emissions as indicated by an instrument reading of less than 500 ppmv above background, as determined initially and thereafter at least once per year by the methods specified in 40 CFR 61.355(h)[40 CFR 61.349(a)(1)(i)].
   (1) Monitoring shall comply with Method 21 from appendix A of 40 CFR part 60.
   (2) The detection instrument shall meet the performance criteria of Method 21.
   (3) The instrument shall be calibrated before use on each day of its use by the procedures specified in Method 21.
   (4) Calibration gases shall be:
      (i) Zero air (less than 10 ppm of hydrocarbon in air); and
      (ii) A mixture of methane or n-hexane and air at a concentration of approximately, but less than, 10,000 ppm methane or n-hexane.
   (5) The background level shall be determined as set forth in Method 21.
   (6) The instrument probe shall be traversed around all potential leak interfaces as close as possible to the interface as described in Method 21.
   (7) The arithmetic difference between the maximum concentration indicated by the instrument and the background level is compared to 500 ppm for determining compliance [40 CFR 61.355(h)].

e. Each closed-vent system and control device shall be visually inspected initially and quarterly thereafter. The visual inspection shall include inspection of ductwork and piping and connections to covers and control devices for evidence of visible defects such as holes in ductwork or piping and loose connections [40 CFR 61.349(f)].

f. An owner or operator subject to the requirements in 40 CFR 61.349 shall install, calibrate, maintain, and operate according to the manufacturer's specifications a device to continuously monitor the control device operation as specified in the following paragraphs, unless alternative monitoring procedures or requirements are approved for that facility by the Administrator. The owner or operator shall inspect at least once each operating day the data recorded by the monitoring equipment (e.g., temperature monitor or flow indicator) to ensure that the control device is operating properly [40 CFR 61.354(c)].
   (1) For a flare, a monitoring device in accordance with 40 CFR 60.18(f)(2) equipped with a continuous recorder [40 CFR 61.354(c)(3)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

4. Specific Monitoring Requirements (Continued):

(2) For a control device subject to the requirements of 40 CFR 61.349(a)(2)(iv), devices to monitor the parameters as specified in 40 CFR 61.349(a)(2)(iv)(C) [40 CFR 61.354(c)(9)].

g. For each enhanced biodegradation unit that is the first exempt waste management unit in a treatment train, measure the benzene concentration of each waste stream entering the unit at least once per month by collecting and analyzing one or more samples using the procedures specified in 40 CFR 61.355(c)(3) [40 CFR 61.354(b)(2)].

5. Specific Recordkeeping Requirements:

a. Each owner or operator shall maintain records that meet the requirements of 40 CFR 61.356(b), (d), and (e) for waste streams, design, and treatment.
b. The permittee shall maintain engineering design documentation for the flare used as control equipment for the life of the control equipment. For each control device, the permittee shall maintain the certification and design analysis records required by 40 CFR 61.356(f).
c. The permittee shall maintain a record of each visual inspection required by 61.343 and 61.347 that identifies a problem, which could result in benzene emissions [40 CFR 61.356 (g)].
d. The permittee shall maintain a record of each test for detectable emissions required by 40 CFR 61.343, 61.347, and 61.349 [40 CFR 61.356 (h)].
e. Each owner or operator shall maintain records that meet the requirements of 40 CFR 61.356(i) for each treatment process and wastewater treatment system; and 40 CFR 61.356(j) for each control device.
f. For TK-191-The permittee shall keep readily accessible records of the following information:
   i. Records of tank dimensions and storage capacity [40 CFR 60.116b(b)].
   ii. Records of the liquid stored, period of storage and maximum True Vapor Pressure of the liquid during that period [40 CFR 60.116b(c)].
g. The permittee shall maintain continuous records of the flare pilot flame monitoring and records of all periods during which the flame is absent [40 CFR 61.356(j)(7)].

6. Specific Reporting Requirements:

a. If an owner or operator elects to comply with the alternative requirements of 40 CFR 61.342(e), then the report required 40 CFR 61.357(d)(2) shall include a table presenting the following information for each waste stream [40 CFR 61.357(d)(5)]:
   (1) For each waste stream identified as not being controlled for benzene emissions in accordance with the requirements 40 CFR 61 Subpart FF; the table shall report the following information for the waste stream as determined at the point of waste generation: annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, and annual benzene quantity [40 CFR 61.357(d)(5)(i)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

6. Specific Reporting Requirements (Continued):

(2) For each waste stream identified as being controlled for benzene emissions in accordance with the requirements of 40 CFR 61 Subpart FF; the table shall report the following information for the waste stream as determined at the applicable location described in 40 CFR 61.355(k)(2): Annual waste quantity, range of benzene concentrations, annual average flow-weighted benzene concentration, and annual benzene quantity [40 CFR 61.357(d)(5)(ii)].

b. The permittee shall submit quarterly a certification that all of the inspections have been carried out as required by 61.343 and 61.347 [40 CFR 61.357(d)(6)].

c. The permittee shall submit a report quarterly that includes:

(1) If a treatment process or wastewater treatment system unit is monitored in accordance with Section 61.354 (a)(1), then each period of operation during which the concentration of benzene in the monitored waste stream exiting the unit is equal to or greater than 10 ppmw. [40 CFR 61.357(d)(7)(i)].

(2) If a treatment process or wastewater treatment system unit is monitored in accordance with Section 61.354 (a)(2), then each 3-hour period of operation during which the average value of the monitored parameter is outside the range of acceptable values or during which the unit is not operating as designed. [40 CFR 61.357(d)(7)(ii)].

(3) If a treatment process or wastewater treatment system unit is monitored in accordance with Section 61.354 (b), then each period of operation during which the flow-weighted annual average concentration of benzene in the monitored waste stream entering the unit is equal to or greater than 10 ppmw and/or the total annual benzene quantity is equal to or greater than 1.0 Mg/yr. [40 CFR 61.357(d)(7)(iii)].

(4) For a control device monitored in accordance with Section 61.354 (c), each period of operation monitored during which any of the following conditions occur, as applicable to the control device [40 CFR 61.357(d)(7)(iv)]:

(i) Each 3-hour period of operation during which the average temperature of the gas stream in the combustion zone of a thermal vapor incinerator, as measured by the temperature monitoring device, is more than 28°C below the design combustion zone temperature. [40 CFR 61.357(d)(7)(iv)(A)].

(ii) Each 3-hour period of operation during which the average temperature of the gas stream immediately before the catalyst bed of a catalytic vapor incinerator, as measured by the temperature monitoring device, is more than 28°C below the design gas stream temperature, and any 3-hour period during which the average temperature difference across the catalyst bed (i.e., the difference between the temperatures of the gas stream immediately before and after the catalyst bed), as measured by the temperature monitoring device, is less than 80 percent of the design temperature difference. [40 CFR 61.357(d)(7)(iv)(B)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

6. Specific Reporting Requirements (Continued):

(iii) Each 3-hour period of operation during which the average temperature of the gas stream in the combustion zone of a boiler or process heater having a design heat input capacity less than 44 MW, as measured by the temperature monitoring device, is more than 28°C below the design combustion zone temperature. [40 CFR 61.357(d)(7)(iv)(C)].

(iv) Each 3-hour period of operation during which the average concentration of organics or the average concentration of benzene in the exhaust gases from a carbon adsorber, condenser, or other vapor recovery system is more than 20 percent greater than the design concentration level of organics or benzene in the exhaust gas. [40 CFR 61.357(d)(7)(iv)(D)].

(v) Each 3-hour period of operation during which the temperature of the condenser exhaust vent stream is more than 6°C (11 °F) above the design average exhaust vent stream temperature, or the temperature of the coolant fluid exiting the condenser is more than 6°C above the design average coolant fluid temperature at the condenser outlet. [40 CFR 61.357(d)(7)(iv)(E)].

(vi) Each period in which the pilot flame of a flare is absent. [40 CFR 61.357(d)(7)(iv)(F)].

(vii) Each occurrence when there is a change in the location at which the vent stream is introduced into the flame zone of a boiler or process heater as required by Section 61.349 (a)(2)(i)(C). [40 CFR 61.357(d)(7)(iv)(G)].

(viii) Each occurrence when the carbon in a carbon adsorber system that is regenerated directly on site in the control device is not regenerated at the predetermined carbon bed regeneration time. [40 CFR 61.357(d)(7)(iv)(H)].

(ix) Each occurrence when the carbon in a carbon adsorber system that is not regenerated directly on site in the control device is not replaced at the predetermined interval specified in Section 61.354 (c). [40 CFR 61.357(d)(7)(iv)(I)].

(x) Each 3-hour period of operation during which the parameters monitored are outside the range of values specified in Section 61.349 (a)(2)(iv)(C), or any other periods specified by the Administrator for a control device subject to the requirements of Section 61.349 (a)(2)(iv). [40 CFR 61.357(d)(7)(iv)(J)].

(5) For a cover and closed-vent system monitored in accordance with Section 61.354 (g), the owner or operator shall submit a report quarterly to the Administrator that identifies any period in which the pressure in the waste management unit is equal to or greater than atmospheric pressure. [40 CFR 61.357(d)(7)(v)].

d. The permittee shall submit annually a report that summarizes all inspections required by 61.343 and 61.347 during which detectable emissions are measured or a problem that could result in benzene emissions is identified. [40 CFR 61.357(d)(8)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

(EPN ET-1) Ethylene Wastewater Pre-treatment Plant
(FF-1) Plant-wide Uncontrolled Benzene Emissions

7. Specific Control Equipment Operating Conditions:
See Ethylene Flare (321) requirements.

8. Alternate Operating Scenarios:
At times during plant shutdowns and Ethylene Flare is not available, the River Flare (EPN 342) may be used as an alternative control device for (EPN ET-1) the Ethylene WWT Pre-treatment Unit. Refer to EPN 342, Alternate Operating Scenarios.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

EU# 008 (EPN 342) River Flare (ET-23)
18.0 mmBtu/hr, natural gas-fired

Description - The John Zink Model GV-ZTOF Hydrocarbon Vapor Combustion Unit burns the vent streams from the aromatic gasoline and ethylene fuel oil barge loading operations. It is a natural gas fired unit with a rated capacity burner of 18 mmBtu/hr. At times during plant shutdowns and Ethylene Flare is not available, the River Flare (EPN 342) may be used as an alternative control device for (EPN ET-1) the Ethylene WWT Pre-treatment Unit.

APPLICABLE REGULATIONS:
401 KAR 63:015, *Flares*, applies to the River Flare.
40 CFR 60 Subpart A, General Provisions, applies to River Flare (See **B.8**, **Alternate Operating Scenarios**).

1. Operating Limitations: None

2. Emission Limitations:
Visible emissions from the River Flare shall not exceed twenty (20) percent opacity for more than three (3) minutes in any one (1) day [401 KAR 63:015, Section 3].

Compliance Demonstration Method:
Whenever waste gas is sent to the River Flare, the permittee shall perform the monitoring and recordkeeping requirements listed under **4. Specific Monitoring requirements** and **5. Specific Recordkeeping Requirements**.

3. Testing Requirements: None

4. Specific Monitoring Requirements:
Whenever waste gas is sent to the flare for combustion, the permittee shall monitor the flare for visible emissions and maintain the records described in **Specific Recordkeeping Requirements** 5.a.

5. Specific Recordkeeping Requirements:
a. Whenever vent gas is sent to the flare for combustion, the permittee shall maintain daily records of whether any air emissions were visible from the flare. If no visible emissions are observed, then no further observations or records are required. If visible emissions are observed, the permittee shall perform the following:
   i. The permittee shall perform a Method 9 reading for the flare. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

EU# 008 (EPN 342) River Flare (ET-23) (continued)

5. Specific Recordkeeping Requirements (Continued):

ii. The permittee shall observe and record in the daily log the following additional information regarding the flare:
   (1) The color of the emissions;
   (2) Whether the emissions were light or heavy;
   (3) The total duration of the visible emission incident;
   (4) The cause of the abnormal emissions; and
   (5) Any corrective actions taken.

b. The permittee shall maintain records of all routine and non-routine maintenance activities performed at the flare.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenarios:

At such time when the River Flare is used as an alternate control device for the waste vent from (EPN ET-1) the Ethylene Plant wastewater pretreatment unit, it shall operate under the following conditions.

a. (1) The permittee shall operate the river flare with a flame present at all times [40 CFR 60.18(c)(2)].
   (2) The permittee shall operate the river flare with a minimum net heating value of the gas being combusted of 11.2 MJ/scm (300 Btu/scf). The net heating value of the gas shall be determined by the method specified in 40 CFR 60.18(f)(3) [40 CFR 60.18(c)(3)(ii)].
   (3) The permittee shall operate the river flare with an exit velocity in compliance with 40 CFR 60.18 (c)(5).

b. (1) Visible emissions from the river flare shall not exceed twenty (20) percent opacity for more than three (3) minutes in any one (1) day [401KAR 63:015, Section 3].
   (2) Compliance with the flare standards contained in 40 CFR 60.18 (c) through (f) shall be deemed compliance with visible emissions standard.

c. The permittee shall install and maintain a thermocouple or any other equivalent device to monitor the presence of a pilot flame in the flare [40 CFR 60.18 (f)(2)].

d. The permittee shall operate the river flare at all times when emissions may be vented to it [40 CFR 60.18 (e)].

e. (1) The permittee shall maintain records of all routine and non-routine maintenance activities performed at the flare.
   (2) The permittee shall maintain records of the pilot flame monitoring and records of all periods during which the flame is absent [40 CFR 61.356 (j)(7)].

f. The permittee shall comply with 40 CFR 60.18 (c)-(f) for general control device requirements for flares.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

8. Alternate Operating Scenarios (Continued):

The River Flare was performance tested in April 2006 in accordance with 40 CFR 61.349(a)(2)(iii) to demonstrate compliance with the provisions of 40 CFR 60.18.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

EU# 023 (EPN 364) No. 4 Cooling Water Tower
Date of Construction: 1963

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart XX & YY, *National emission standard for ethylene manufacturing*, applies to the No. 4 Cooling Water Tower.

401 KAR 63:010 – Fugitive emissions, applies to the cooling tower.

1. Operating Limitations:

a. If a leak is detected, it is to be repaired according to 40 CFR 63.1087 unless the repair is delayed according to 40 CFR 63.1088 [40 CFR 63.1085(b)].
b. All reasonable measures shall be taken to prevent particulate matter from becoming airborne from the cooling tower at all times [401 KAR 63:010 (3)(1)].
c. Pursuant to 40 CFR 63 Subpart YY [40 CFR 63.1103 (e)(3)(h), the heat exchanger shall comply with the heat exchanger system requirements of 40 CFR 63 Subpart XX.

Compliance Demonstration Method:
For compliance, refer to F.9 for compliance reporting.

2. Emission Limitations: None

3. Testing Requirements:
Refer to **4. Specific Monitoring Requirements.**

4. Specific Monitoring Requirements:
Pursuant to 40 CFR 63.1086, the permittee must monitor for leaks to cooling water by monitoring each heat exchange system according to the requirements of 40 CFR 63.1086 (a), and monitoring each heat exchanger according to the requirements of 40 CFR 63.1086 (b).

a. *Heat exchange system.* Monitor cooling water in each heat exchange system for the HAP listed in Table 1 to 40 CFR 63 Subpart XX (either total or speciated) or other representative substances (e.g., total organic carbon or volatile organic compounds (VOC)) that indicate the presence of a leak according to the requirements in paragraphs (a)(1) through (5) of this section.

(1) You define the equipment that comprises each heat exchange system. For the purposes of implementing paragraph (a) of this section, a heat exchange system may consist of an entire heat exchange system or any combinations of heat exchangers such that, based on the rate of cooling water at the entrance and exit to each heat exchange system and the sensitivity of the test method being used, a leak of 3.06 kg/hr or greater of the HAP in Table 1 of 40 CFR 63 Subpart XX would be detected. For example, if the test you decide to use has a sensitivity of 1 ppmv for total HAP, you must define the heat exchange system so that the cooling water flow rate is 51,031 liters per minute or less so that a leak of 3.06 kg/hr can be detected.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

EU# 023 (EPN 364) No. 4 Cooling Water Tower

4. Specific Monitoring Requirements (Continued):

(2) Monitoring periods. For existing sources, monitor cooling water as specified in paragraph (a)(2)(i) of 40 CFR 63.1086. Monitor heat exchange systems at new sources according to the specifications in paragraph (a)(2)(ii) of 40 CFR 63.1086.

(i) Monitor monthly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in either paragraph (a)(2)(i)(A) or (a)(2)(i)(B) of 40 CFR 63.1086, as appropriate.

(A) If no leaks are detected by monitoring monthly for a 6-month period, monitor quarterly thereafter until a leak is detected.

(B) If a leak is detected, monitor monthly until the leak has been repaired. Upon completion of repair, monitor according to the specifications in paragraph (a)(2)(i) of 40 CFR 63.1086.

(ii) Monitor weekly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in paragraph (a)(2)(ii)(A) or (B) 40 CFR 63.1086, as appropriate.

(A) If no leaks are detected by monitoring weekly for a 6-month period, monitor monthly thereafter until a leak is detected.

(B) If a leak is detected, monitor weekly until the leak has been repaired. Upon completion of the repair, monitor according to the specifications in paragraph (a)(2)(ii) of 40 CFR 63.1086.

(3) Determine the concentration of the monitored substance in the heat exchange system cooling water using any method listed in 40 CFR Part 136. Use the same method for both entrance and exit samples. You may validate 40 CFR Part 136 methods for the HAP listed in Table 1 40 CFR 63 Subpart XX, according to the procedures in appendix D to 40 CFR 63.1086. Alternative methods may be used upon approval by the Administrator.

(4) Take a minimum of three sets of samples at each entrance and exit.

(5) Calculate the average entrance and exit concentrations, correcting for the addition of make-up water and evaporative losses, if applicable. Using a one-sided statistical procedure at the 0.05 level of significance, if the exit mean concentration is at least 10 percent greater than the entrance mean of the HAP (total or speciated) in Table 1 to 40 CFR 63 Subpart XX, or other representative substance, and the leak is at least 3.06 kg/hr, you have detected a leak.

b. *Individual heat exchangers.* Monitor the cooling water at the entrance and exit of each heat exchanger for the HAP in Table 1 to 40 CFR 63 Subpart XX (either total or speciated) or other representative substances (e.g., total organic carbon or VOC) that indicate the presence of a leak in a heat exchanger according to the requirements in paragraphs (b)(1) through (4) of 40 CFR 63.1086.

(1) Monitoring periods. For existing sources, monitor cooling water as specified in paragraph (b)(1)(i) of 40 CFR 63.1086. Monitor each heat exchanger at new sources according to the specifications in paragraph (b)(1)(ii) of 40 CFR 63.1086.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

EU# 023 (EPN 364) No. 4 Cooling Water Tower

4. Specific Monitoring Requirements (Continued):

(i) Monitor monthly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in paragraph (b)(1)(i)(A) or (b)(1)(i)(B) of 40 CFR 63.1086, as appropriate.

(A) If no leaks are detected by monitoring monthly for a 6-month period, monitor quarterly thereafter until a leak is detected.

(B) If a leak is detected, monitor monthly until the leak has been repaired. Upon completion of repair, monitor according to the specifications in paragraph (b)(1)(i) of 40 CFR 63.1086.

(ii) Monitor weekly for 6 months, both initially and following completion of a leak repair. Then monitor as provided in paragraph (b)(1)(ii)(A) or (B) of 40 CFR 63.1086, as appropriate.

(A) If no leaks are detected by monitoring weekly for a 6-month period, monitor monthly thereafter until a leak is detected.

(B) If a leak is detected, monitor weekly until the leak has been repaired. Upon completion of the 40 CFR 63.1086.

(2) Determine the concentration of the monitored substance in the cooling water using any method listed in 40 CFR Part 136, as long as the method is sensitive to concentrations as low as 10 ppmv. Use the same method for both entrance and exit samples. Validation of 40 CFR part 136 methods for the HAP listed in Table 1 to 40 CFR 63 Subpart XX may be determined according to the provisions of appendix D 40 CFR Part 63. Alternative methods may be used upon approval by the Administrator.

(3) Take a minimum of three sets of samples at each heat exchanger entrance and exit.

(4) Calculate the average entrance and exit concentrations, correcting for the addition of make-up water and evaporative losses, if applicable. Using a one-sided statistical procedure at the 0.05 level of significance, if the exit mean concentration is at least 1 ppmw or 10 percent greater than the entrance mean, whichever is greater, you have detected a leak [40 CFR 63.1086(a) and (b)].

5. Specific Recordkeeping Requirements:

The permittee shall keep the records in paragraphs 40 CFR 63.1089 (a) through (e), according to the requirements of 40 CFR 63.1109(c) [40 CFR 63.1089].

a. Monitoring data required by 40 CFR 63.1086 that indicate a leak, the date the leak was detected, or, if applicable, the basis for determining there is no leak [40 CFR 63.1089(a)].

b. The dates of efforts to repair leaks [40 CFR 63.1089(b)].

c. The method or procedures used to confirm repair of a leak and the date the repair was confirmed [40 CFR 63.1089(c)].

d. Documentation of delay of repair as specified in 40 CFR 63.1088 [40 CFR 63.1089(d)].

e. If you validate a 40 CFR part 136 method for the HAP listed in Table 1 to 40 CFR 63 Subpart XX according to the procedures in appendix D to 40 CFR Part 63, then you must keep a record of the test data and calculations used in the validation [40 CFR 63.1089(e)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

B. ETHYLENE PLANT:

EU# 023 (EPN 364) No. 4 Cooling Water Tower

6. Specific Reporting Requirements:

If repair is delayed for the heat exchange system, the permittee must report the delay of repair in the semiannual report required by 40 CFR 63.1110(e). If the leak remains unrepaired, the permittee must continue to report the delay of repair in semiannual reports until the leak has been repaired. The permittee must include the information in 40 CFR 63.1090 (a) through (e) in the semiannual report [40 CFR 63.1090].

a. The fact that a leak was detected, and the date that the leak was detected [40 CFR 63.1090 (a)].
b. Whether or not the leak has been repaired [40 CFR 63.1090 (b)].
c. The reasons for delay of repair. If the repair is delayed as provided in 40 CFR 63.1088(b), documentation of emissions estimates [40 CFR 63.1090 (c)].
d. If a leak remains unrepaired, the expected date of repair [40 CFR 63.1090 (d)].
e. If a leak is repaired, the date the leak was successfully repaired [40 CFR 63.1090 (e)].

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU# 001 (EPN 008) **Boiler #1**

Type:	Combustion Engineering, UP - 12W
Capacity:	161.2 mmBtu/hr
Fuel:	Process Fuel Gas*
Date of construction:	1963
Source of Emissions:	Fuel combustion (no controls)
Control Device:	None

EU# 002 (EPN 010) **Boiler #3**

Type:	Riley-Stoker, Rx 25 (converted)
Capacity:	130.64 mmBtu/hr
Fuel:	Process Fuel Gas*
Date of construction:	1954
Source of Emissions:	Fuel combustion (no controls)
Control Device:	None

* Process fuel gas includes natural gas, ethylene plant fuel gas, hydrogen, propane and mixtures thereof.

APPLICABLE REGULATIONS:
401 KAR 61:015, *Existing indirect heat exchangers,* applies to Boilers #1 and #3.

1. Operating Limitations: None

2. Emission Limitations:
For any combination of fuels -
Mass Emission Limits:

a. Emissions of particulate matter shall not exceed 0.16 lb/mmBtu [401 KAR 61:015, Section 4 (1) and Permit O-88-040].
b. Emissions of sulfur dioxide shall not exceed 0.33 lb/mmBtu [401 KAR 61:015, Section 5 (1) and Permit O-88-040].
c. Emissions of particulate matter shall not exceed 50.6 tons during any twelve (12) consecutive months [*Synthetic Minor Limit*, Permit O-88-040].
d. Emissions of sulfur dioxide shall not exceed 104.0 tons during any twelve (12) consecutive months [*Synthetic Minor Limit*, Permit O-88-040].

Visible Emission Limits:

e. For any combination fuels used, the opacity of visible emissions shall not exceed 20 percent [401 KAR 61:015, Section 4 (2)] except as provided below:
   (1) Pursuant to 401 KAR 61:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.
   (2) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU# 001 (EPN 008) Boiler #1
EU# 002 (EPN 010) Boiler #3

Compliance Demonstration Method:

Mass Emission Limits:

For particulate matter and SO_2:

a. For each boiler, burning only the fuels specified in this permit shall be deemed to be compliance with the applicable performance standards (lb/mmBtu limits).
b. For each boiler, compliance with the annual particulate matter and SO_2 emission limits (tons per year) shall be determined through the following formula:

   Actual Annual Emissions of $PM/PM_{10}/SO_2$ (tpy) =
   [Amount of each fuel used per year x Emission factor for $PM/PM_{10}/SO_2$ (in lbs/ft^3 or lbs/gallon of that fuel)] / 2000 (lb/ton)

   The permittee shall calculate and maintain records of the monthly emissions of $PM/PM_{10}/SO_2$ and the 12-month rolling total of emissions for each pollutant.

Opacity Limits:

c. For each boiler, compliance with the opacity limits is demonstrated when burning process gas.

3. Testing Requirements:

Pursuant to 401 KAR 59:005, Section 2(2) and 401 KAR 50:045, Section 1, performance testing using the Reference Methods specified in 401 KAR 50:015 shall be conducted as required by the Division.

4. Specific Monitoring Requirements:

The permittee shall monitor the process fuel gas consumption for Boiler #1 and Boiler #3. The rate of fuel burned shall be measured daily or at shorter intervals and recorded. The heating value and ash content of fuel shall be ascertained at least once per week and recorded. [401 KAR 61:015, Section 6 (3)]. Compliance with 401 KAR 61:015 can be demonstrated by monthly measurements and records of fuel burned.

5. Specific Recordkeeping Requirements:

The permittee shall maintain records of the monthly consumption records for fuel used at Boiler #1 and #3. Refer to **4. Specific Monitoring Requirements.**

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU# 026 (EPN 049) Equalization Tank (TK-1850)(EE-6)
1,500,000-gallon capacity
External Floating Roof
Date of construction: 1986

APPLICABLE REGULATIONS:
401 KAR 57:002, which incorporates by reference federal regulation 40 CFR 61 Subpart FF, *National emission standard for benzene waste operations*, applies to the Equalization Tank.

Refer to (EPN ET-1) Ethylene Wastewater Pre-Treatment Plant (FF-1) Plant-wide Uncontrolled Benzene Emissions for benzene waste stream requirements in Section B of the permit, Ethylene Plant.

1. Operating Limitations:
The permittee shall equip the tank with an external floating roof meeting the requirements of 40 CFR 60.112b(a)(2) [40 CFR 61.351(a)(2)].

Compliance Demonstration Method:
Refer to **F.9** for compliance reporting and **5. Specific Recordkeeping Requirements** and **6. Specific Reporting Requirements.**

2. Emission Limitations:
None

3. Testing Requirements:
The permittee shall perform seal gap inspections as follows: [40 CFR 60.113b(b)]
a. The primary seal shall be inspected initially and once every 5 years thereafter [40 CFR 60.113b(b)(1)(i)].
b. The secondary seal shall be inspected initially and once each year thereafter [40 CFR 60.113b(b)(1)(ii)].

4. Specific Monitoring Requirements:
Refer to **3. Testing Requirements** for seal gap inspections.

5. Specific Recordkeeping Requirements:
a. The permittee shall comply with the recordkeeping requirements in 40 CFR 60.115b [40 CFR 61.356(k)]
b. The permittee shall keep a record of each seal gap measurement performed as required by 60.113b(b) [40 CFR 60.115b(b)(3)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU# 026 (EPN 049)

6. Specific Reporting Requirements:

a. The permittee shall comply with the reporting requirements in 40 CFR 60.115b [40 CFR 61.357(f)].
b. Within 60 days of performing a seal gap measurement required by 60.113b(b)(1), the permittee shall submit a report containing data and calculations [40 CFR 60.115b(b)(2)].
c. Within 30 days of performing a seal gap measurement that exceeds the limits in 60.113b(b)(4), the permittee shall submit a report on corrective action [40 CFR 60.115b(b)(4)].

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU# 027 (EPN 052) No. 3 Cooling Water Tower
Date of Construction: 1959

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart F, *National emission standard for organic hazardous air pollutants form the synthetic organic chemical manufacturing industry*, applies to the cooling tower. Specific requirements are from 40 CFR 63.104, *Heat Exchange System Requirements*.
401 KAR 63:010, *Fugitive emissions*, applies to the cooling tower.

1. Operating Limitations:
All reasonable measures shall be taken to prevent particulate matter from becoming airborne from the cooling tower at all times [401 KAR 63:010, Section 3(1)].

Compliance Demonstration Method:
Refer to **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

2. Emission Limitations:
a. Unless one or more of the conditions specified in paragraphs (a)(1) through (a)(6) of 40 CFR 63.104 are met, owners and operators of sources subject to 40 CFR Subpart F shall monitor each heat exchange system used to cool process equipment in a chemical manufacturing process unit meeting the conditions of 40 CFR 63.100 (b)(1) through (b)(3) of 40 CFR 63 Subpart F, except for chemical manufacturing process units meeting the condition specified in 40 CFR 63.100(c), according to the provisions in either paragraph (b) or (c) of 40 CFR 63.104 [40 CFR 63.104 (a)].
b. All reasonable measures shall be taken to prevent particulate matter from becoming airborne from the cooling tower at all times [401 KAR 63:010, Section 3(1)].

Compliance Demonstration Method:
The Cooling Tower is in compliance 40 CFR 63.104(a) by monitoring the cooling tower for indication of leaks in accordance with 40 CFR 63.104(b) [40 CFR 63.104(a)]. Refer to **F.9** for compliance reporting.

3. Testing Requirements:
The cooling water HAP concentration shall be tested according to the appropriate EPA method in 40 CFR Part 136, according to 40 CFR 63.104(b)(3).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU# 027 (EPN 052) No. 3 Cooling Water Tower

4. Specific Monitoring Requirements:

a. The owner or operator who elects to comply with the requirements of paragraph (a) of 40 CFR 63.104 by monitoring the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak shall comply with the requirements specified in paragraphs (b)(1) through (b)(6) of 40 CFR 63.104. The cooling water shall be monitored for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system [40 CFR 63.104(b)].

(1) The cooling water shall be monitored monthly for the first 6 months and quarterly thereafter to detect leaks [40 CFR 63.104(b)(1)].

(2) (i) For recirculating heat exchange systems (cooling tower systems), the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 4 of 40 CFR 63 Subpart F [40 CFR 63.104(b)(2)(i)].

(ii) For once-through heat exchange systems, the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 9 of 40 CFR Part 63 Subpart G [40 CFR 63.104(b)(2)(ii)].

(3) The concentration of the monitored substance(s) in the cooling water shall be determined using any EPA-approved method listed 40 CFR 63.136 as long as the method is sensitive to concentrations as low as 10 parts per million and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by the Administrator [40 CFR 63.104(b)(3)].

(4) The samples shall be collected either at the entrance and exit of each heat exchange system or at locations where the cooling water enters and exits each heat exchanger or any combination of heat exchangers. [40 CFR 63.104(b)(4)]

(i) For samples taken at the entrance and exit of recirculating heat exchange systems, the entrance is the point at which the cooling water leaves the cooling tower prior to being returned to the process equipment and the exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid [40 CFR 63.104(b)(4)(i)].

(ii) For samples taken at the entrance and exit of once-through heat exchange systems, the entrance is the point at which the cooling water enters and the exit is the point at which the cooling water exits the plant site or chemical manufacturing process units [40 CFR 63.104(b)(4)(ii)].

(iii) For samples taken at the entrance and exit of each heat exchanger or any combination of heat exchangers in chemical manufacturing process units, the entrance is the point at which the cooling water enters the individual heat exchanger or group of heat exchangers and the exit is the point at which the cooling water exits the heat exchanger or group of heat exchangers [40 CFR 63.104(b)(4)(iii)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU# 027 (EPN 052) No. 3 Cooling Water Tower

4. Specific Monitoring Requirements (Continued):

(5) A minimum of three sets of samples shall be taken at each entrance and exit as defined in paragraph (b)(4) of 40 CFR 63.104. The average entrance and exit concentrations shall then be calculated. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable [40 CFR 63.104(b)(5)].

(6) A leak is detected if the exit mean concentration is found to be greater than the entrance mean using a one-sided statistical procedure at the 0.05 level of significance and the amount by which it is greater is at least 1 part per million or 10 percent of the entrance mean, whichever is greater [40 CFR 63.104(b)(6)].

b. If a leak is detected during monitoring, repair the leak within 45 days [40 CFR 63.104(d)(1)]. Confirm leak has been repaired within 7 days of repair or startup; whichever is later [40 CFR 63.104(d)(2)]. Repairs may be delayed according to 40 CFR 63.104(e).

5. Specific Recordkeeping Requirements:

Keep records of leaks detected during monitoring and repairs according to 40 CFR 63.104(f)(1).

6. Specific Reporting Requirements:

HON semi-annual periodic reports shall include any delay of repairs for leaks detected during heat exchange system monitoring according to 40 CFR 63.104(f)(2).

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU# 028 (EPN 445) Contaminated Wastewater Storage Tank
1,200,000-gallon capacity
Fixed Roof
Date of construction: 1981
Equipped with closed vent system going to the Westlake - Oxy Incinerator (453) or Primary Thermal Incinerator (530).

(EPN 446) Storm water Storage Tank
1,200,000-gallon capacity
Fixed Roof
Date of construction: 1985
Equipped with closed vent system going to the Westlake Monomers incinerators - Oxy Incinerator (453) or Primary Thermal Incinerator (530).

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart G, *National emission standard for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations, and wastewater*, applies to the tanks listed above, EU #028 (EPN 445 and 446).

NON-APPLICABLE REGULATIONS
40 CFR 63.133, Process wastewater provisions for wastewater tanks is not applicable pursuant to 40 CFR 63.149(c), the item of equipment is part of a chemical manufacturing process unit that meets the criteria of 40 CFR 63.100(b).

1. Operating Limitations:
For each of the tanks listed above:
a. The owner or operator shall comply with the provisions of table 35 of 40 CFR 63 Subpart G, for each item of equipment meeting all the criteria specified in paragraphs 40 CFR 63.149 (b) through (d) and either paragraph 40 CFR 63.149 (e)(1) or (e)(2) [40 CFR 63.149(a)].
b. Pursuant to table 35 of 40 CFR 63 Subpart G, maintain a fixed roof. If the tank is sparged or used for heating or treating by means of an exothermic reaction, a fixed roof and a system shall be maintained that routes the organic hazardous air pollutants vapors to other process equipment or a fuel gas system, or a closed vent system that routes vapors to a control device that meets the requirements of 40 CFR 63.119 (e)(1) or (e)(2).

Compliance Demonstration Method:
The source has elected to control the vents from each tank in either the Oxy or Primary Incinerators (EPN 453 or EPN 530). Refer to **F.9** for compliance reporting.

2. Emission Limitations:
Refer to **1. Operating Limitations**.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU#028
(EPN 445) Contaminated Wastewater Storage Tank and (EPN 446) Storm Water Storage Tank

3. Testing Requirements:
Streams were sampled using Analytical Method 624 as prescribed in 40 CFR 63.144 to show that at least one stream going to tanks meets the criteria of 40 CFR 63.149(e)(2). Results were submitted to the Division on March 20, 2008. Both tanks were shown to receive one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm (by weight) of Table 9 compounds (EDC) at an annual average flow rate greater than or equal to 10 liters per minute as described in 40 CFR 63.149(e)(2).

4. Specific Monitoring Requirements:
None

5. Specific Recordkeeping Requirements:
None

6. Specific Reporting Requirements:
Refer to Section **F.9** for compliance reporting.

7. Specific Control Equipment Operating Conditions:
See requirements for the Oxy Incinerator (EPN 453) and Primary Thermal Incinerator (EPN 530).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU# 032 (EPN EE-4) EDC Recovery Column
Date of Construction: 1979

Description - The EDC Recovery Columns recover VOCs, primarily Ethylene Dichloride and Vinyl Chloride, from process wastewater streams. This system vents to Westlake Monomers incinerators - Oxy Incinerator (453) or Primary Thermal Incinerator (530).

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart G, *National emission standard for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations, and wastewater*, applies to the EDC Recovery Columns.

1. Operating Limitations:
The permittee shall comply with the requirements for Group 2 wastewater streams for the bottoms stream discharged from the recovery columns by compliance with the applicable recordkeeping and reporting requirements in 40 CFR 63.146 (b)(1) and 63.147(b)(8). [40 CFR 63.132(a)(3)]

Compliance Demonstration Method:
For compliance, refer to **5. Specific Recordkeeping Requirements** and 6. **Specific Reporting Requirements.**

2. Emission Limitations:
None

3. Testing Requirements:
Pursuant to 40 CFR 63.132(c), to determine Group 2 status for the recovery column bottoms for Table 9 compounds:
a) The total annual average concentration shall be determined in accordance with 40 CFR 63.144(b) and,
b) Annual average flow rate shall be determined in accordance with the procedures in 40 CFR 63.144(c).

4. Specific Monitoring Requirements:
None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU# 032 (EPN EE-4) EDC Recovery Column

5. Specific Recordkeeping Requirements:

Pursuant to 40 CFR 63.146(b)(1), the permittee shall maintain records of the following information:

a. Process unit identification and description of process unit [40 CFR 63.146(b)(1)(i)],
b. Stream identification code [40 CFR 63.146(b)(1)(ii)];
c. Concentration of Table 9 compounds (ppmw) and methodology used to determine the bottoms stream concentration [40 CFR 63.146(b)(1)(iii)].
d. Flow rate in liter per minute [40 CFR 63.146(b)(1)(iv)].

6. Specific Reporting Requirements:

a. Pursuant to 40 CFR 63.152(c)(2), the permittee shall submit to the Division semi-annual reports including notification if the bottoms stream becomes a Group 1 emission point, including a compliance schedule as required in 40 CFR 63.100 [40 CFR 63.152(c)(4)(iii)].
b. Pursuant to 40 CFR 63.147(b)(8), the permittee shall submit to the Division for Air Quality Regional Office semi-annual reports of the following information:
   i. Process unit identification and description of process unit [40 CFR 63.147(b)(8)(i)];
   ii. Stream identification code [40 CFR 63.147(b)(8)(ii)];
   iii. Concentration of Table 9 compounds (ppmw) and methodology used to determine the bottoms stream concentration [40 CFR 63.147(b)(8)(iii)]; and
   iv. Flow rate in liter per minute [40 CFR 63.147(b)(8)(iv)].

7. Specific Control Equipment Operating Conditions:

See requirements for the Oxy Incinerator (EU #032, EPN453) and Primary Thermal Incinerator (EU #033, EPN530).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU# 028 (EPN EE-5) Activated Sludge Biotreatment System/Secondary Wastewater Treatment System
Date of Construction: 1979

Description - The secondary water treatment system consists of a primary clarifier, EQ tank, biotreater, secondary clarifier, and a sludge biotreater.

APPLICABLE REGULATIONS:
401 KAR 57:002, which incorporates by reference federal regulation 40 CFR 61 Subpart FF, *National emission standard for benzene waste operations*, applies to the Activated Sludge Biotreatment System. Refer to (EPN ET-1) Ethylene Wastewater Pretreatment Plant and (FF-1) Plant-wide Uncontrolled Benzene Emissions for benzene waste stream requirements in Section B of the permit, Ethylene Plant.

1. Operating Limitations:
For operating limitations, refer to **2. Emission Limitations**.

Compliance Demonstration Method:
Compliance with 40 CFR 61 Subpart FF will be determined by review of the facility records and results from tests and inspections using the methods and procedures specified in 40 CFR 61.355 [40 CFR 61.342(g)]. Refer to **3. Testing Requirements.**

2. Emission Limitations:
a. The benzene concentration for each waste stream entering the activated sludge biotreatment system shall be less than 10 ppmw on a flow-weighted annual average basis [40 CFR 61.355(k)(4)(i)].
b. All prior waste management units managing the waste comply with 40 CFR 61.343, 61.344, 61.345, 61.346, 61.347 and 61.348(a) [40 CFR 63.355(k)(4)(ii)].

Compliance Demonstration Method:
For compliance, refer to **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

3. Testing Requirements:
The permittee shall determine the flow-weighted annual average benzene concentration using the methods given in 61.355(c)(3) [61.355(c)].

4. Specific Monitoring Requirements:
The permittee shall monitor the benzene concentration in the aggregated waste stream exiting the Equalization Tank TK-1850 before it is fed to the Activated Sludge Biotreatment System at least monthly using the procedures specified in 40 CFR 61.355(c)(3) [40 CFR 61.354(b)(2)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

C. ENERGY AND ENVIRONMENTAL PLANT:

EU#028 EPN EE-5 Activated Sludge Biotreatment System/Secondary Wastewater Treatment System

5. Specific Recordkeeping Requirements:
Records of monthly benzene inlet samples of the aggregated waste stream entering the enhanced biotreatment system shall be maintained.

6. Specific Reporting Requirements:
The permittee shall submit quarterly a report that includes any periods during which the flow-weighted annual average concentration of benzene in the monitored waste stream that is fed to the Activated Sludge Biotreatment System is equal to or greater than 10 ppmw [61.357(d)(7)(iii)].

7. Specific Control Equipment Operating Conditions:
None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

WESTLAKE MONOMERS PLANT

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 029 (EPN 407) Catoxid Reactor Startup Vent
Date of Construction: 1974
Control: Scrubber
Emissions: Catoxid reactor exhaust is released during startup.

APPLICABLE REGULATIONS:
401 KAR 50:012 General Application.

1. **Operating Limitations:**
Pursuant to 401 KAR 50:012, Section 1(c)(2), in the absence of a standard specified in these administrative regulations, all major air contaminant sources shall as a minimum apply control procedures that are reasonable, available, and practical.

Compliance Demonstration Method:
For compliance, the permittee shall operate the Catoxid Vent Scrubber at all times the Catoxid Startup Vent is used. Refer to **5. Specific Recordkeeping Requirements** and 6. **Specific Reporting Requirements**.

2. **Emission Limitations:** None

3. **Testing Requirements:** None

4. **Specific Monitoring Requirements:** None

5. **Specific Recordkeeping Requirements:** None

6. **Specific Reporting Requirements:**
a. The permittee shall report any times in which the Catoxid Startup Vent is used and the Vent Scrubber is not in operation.
b. Although this emission unit is for the Catoxid Reactor Startup, there are no notifications for startups required by 401 KAR 50:055, Section 1, because compliance with the operating limitations demonstrates minimization of emission during startup.

7. **Specific Control Equipment Operating Conditions:** None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 030	(EPN 438)	No. 1 EDC Shore Tank/ Alternate Vacuum Feed Tank 599,466-gallon capacity Internal Floating Roof Date of construction: 1980 Maximum Vapor Pressure: 1.23 pounds per square inch (psi)
	(EPN 454)	No. 5 EDC Shore Tank 1,387,000-gallon capacity Internal Floating Roof Date of construction: 1978 Maximum Vapor Pressure: 1.23 psi
	(EPN 455)	No. 6 EDC Shore Tank 1,387,000-gallon capacity Internal Floating Roof Date of construction: 1978 Maximum Vapor Pressure: 1.23 psi

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart G, *National emission standard for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations, and wastewater*, applies to the No. 1, No. 5, and No. 6 EDC Shore Tanks.

40 CFR 60 Subpart Ka, *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984,* applies to the No. 1, No. 5, and No. 6 EDC Shore Tanks.

NON-APPLICABLE REGULATIONS
40 CFR 60 Subpart Kb is not applicable. Pursuant to 40 CFR 63.110(b) *Overlap with other regulations for storage vessels.* (1) After the compliance dates specified in 40 CFR 63.100 of subpart, a Group 1 or Group 2 storage vessel that is also subject to the provisions of 40 CFR part 60, subpart Kb is required to comply only with the provisions of 40 CFR 63 Subpart G.

1. Operating Limitations:
The tank shall be equipped with an internal floating roof and a double seal system in accordance with 40 CFR 63.119(b).

Compliance Demonstration Method:
a. Pursuant to 40 CFR 63.119(b)(1), the internal floating roof shall be floating on the liquid surface at all times except when the floating roof must be supported by the leg supports during the periods specified in paragraphs (b)(1)(i) through (b)(1)(iii) of 40 CFR 63.119.
(i) During the initial fill [40 CFR 63.119(b)(1)(i)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 030	(EPN 438)	No. 1 EDC Shore Tank/ Alternate Vacuum Feed Tank
	(EPN 454)	No. 5 EDC Shore Tank
	(EPN 455)	No. 6 EDC Shore Tank

Compliance Demonstration Method (Continued):

(ii) After the vessel has been completely emptied and degassed [40 CFR 63.119(b)(1)(ii)].

(iii)When the vessel is completely emptied before being subsequently refilled [40 CFR 63.119(b)(1)(iii)].

b. When the floating roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as soon as practical [40 CFR 63.119(b)(2)].

c. Each internal floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. Except as provided in paragraph (b)(3)(iv) of 40 CFR 63.119, the closure device shall consist of one of the devices listed in paragraph (b)(3)(i), (b)(3)(ii), or (b)(3)(iii) of 40 CFR 63.119. [40 CFR 63.119(b)(3)].

(i) A liquid-mounted seal as defined in 40 CFR 63.111. [40 CFR 63.119(b)(3)(i)].

(ii) A metallic shoe seal as defined in 40 CFR 63.111 [40 CFR 63.119(b)(3)(ii)].

(iii)Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor- mounted, but both must be continuous seals [40 CFR 63.119(b)(3)(iii)].

d. Automatic bleeder vents are to be closed at all times when the roof is floating, except when the roof is being floated off or is being landed on the roof leg supports [40 CFR 63.119 (b)(4)].

e. Except as provided in paragraph (b)(5)(viii) of 40 CFR 63.119, each internal floating roof shall meet the specifications listed in paragraphs (b)(5)(i) through (b)(5)(vii) of 40 CFR 63.119. [40 CFR 63.119 (b)(5)].

(i) Each opening in a non-contact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and rim space vents is to provide a projection below the liquid surface. [40 CFR 63.119 (b)(5)(i)].

(ii) Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains shall be equipped with a cover or lid. The cover or lid shall be equipped with a gasket. [40 CFR 63.119 (b)(5)(ii)].

(iii) Each penetration of the internal floating roof for the purposes of sampling shall be a sample well. Each sample well shall have a slit fabric cover that covers at least 90 percent of the opening. [40 CFR 63.119 (b)(5)(iii)].

(iv) Each automatic bleeder vent shall be gasketed. [40 CFR 63.119 (b)(5)(iv)].

(v) Each rim space vent shall be gasketed. [40 CFR 63.119 (b)(5)(v)].

(vi) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover. [40 CFR 63.119 (b)(5)(vi)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 030	(EPN 438)	No. 1 EDC Shore Tank/ Alternate Vacuum Feed Tank
	(EPN 454)	No. 5 EDC Shore Tank
	(EPN 455)	No. 6 EDC Shore Tank

Compliance Demonstration Method (Continued):

(vii) Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or a gasketed sliding cover. [40 CFR 63.119 (b)(5)(vii)].

(B) No later than 10 years after April 22, 1994. [40 CFR 63.119 (b)(5)(viii)(B)].

f. Each cover or lid on any opening in the internal floating roof shall be closed (i.e., no visible gaps), except when the cover or lid must be open for access. Covers on each access hatch and each gauge float well shall be bolted or fastened so as to be airtight when they are closed. Rim space vents are to be set to open only when the internal floating roof is not floating or when the pressure beneath the rim seal exceeds the manufacturer's recommended setting. [40 CFR 63.119(b)(6)].

g. Compliance with 40 CFR 60.110 (Subpart Ka) shall be demonstrated by compliance with the more stringent overlapping regulation which applies: 40 CFR 63 Subpart G.

2. Emission Limitations:

None

3. Testing Requirements:

Refer to **4. Specific Monitoring Requirements**.

4. Specific Monitoring Requirements:

a. To demonstrate compliance with 40 CFR 63.119(b)(storage vessel equipped with a fixed roof and internal floating roof) or with 40 CFR 63.119(d) (storage vessel equipped with an external floating roof converted to an internal floating roof), the owner or operator shall comply with the requirements in paragraphs (a)(1) through (a)(7) of 40 CFR 63.120. [40 CFR 63.120(a)].

(1) The owner or operator shall visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), according to the schedule specified in paragraphs (a)(2) and (a)(3) of 40 CFR 63.120. [40 CFR 63.120(a)(1)].

(2) For vessels equipped with a single-seal system, the owner or operator shall perform the inspections specified in paragraphs (a)(2)(i) and (a)(2)(ii) of 40 CFR 63.120. [40 CFR 63.120(a)(2)].

(i) Visually inspect the internal floating roof and the seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months after the compliance date specified in 40 CFR 63.100 of subpart F. [40 CFR 63.120(a)(2)(i)].

(ii) Visually inspect the internal floating roof, the seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed, and at least once every 10 years after the compliance date specified in 40 CFR 63.100. [40 CFR 63.120(a)(2)(ii)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 030	(EPN 438)	No. 1 EDC Shore Tank/ Alternate Vacuum Feed Tank
	(EPN 454)	No. 5 EDC Shore Tank
	(EPN 455)	No. 6 EDC Shore Tank

4. Specific Monitoring Requirements (Continued):

(3) For vessels equipped with a double-seal system as specified in 40 CFR 63.119(b)(3)(iii), the owner or operator shall perform either the inspection required in paragraph (a)(3)(i) of 40 CFR 63.120 or the inspections required in both paragraphs (a)(3)(ii) and (a)(3)(iii) of 40 CFR 63.120. [40 CFR 63.120(a)(3)].

(i) The owner or operator shall visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the storage vessel is emptied and degassed and at least once every 5 years after the compliance date specified in 40 CFR 63.100 of subpart F; [40 CFR 63.120(a)(3)(i)], or

(ii) The owner or operator shall visually inspect the internal floating roof and the secondary seal through manholes and roof hatches on the fixed roof at least once every 12 months after initial fill, or at least once every 12 months after the compliance date specified in 40 CFR 63.100 of subpart F, [40 CFR 63.120(a)(3)(ii)], and

(iii) Visually inspect the internal floating roof, the primary seal, the secondary seal, gaskets, slotted membranes, and sleeve seals (if any) each time the vessel is emptied and degassed and at least once every 10 years after the compliance date specified in 40 CFR 63.100 of subpart. [40 CFR 63.120(a)(3)(iii)].

(4) If during the inspections required by paragraph (a)(2)(i) or (a)(3)(ii) of 40 CFR 63.120, the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached; or there are holes or tears in the seal fabric; or there are visible gaps between the seal and the wall of the storage vessel, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 calendar days. If a failure that is detected during inspections required by paragraph (a)(2)(i) or (a)(3)(ii) of 40 CFR 63.120 cannot be repaired within 45 calendar days and if the vessel cannot be emptied within 45 calendar days, the owner or operator may utilize up to 2 extensions of up to 30 additional calendar days each. Documentation of a decision to utilize an extension shall include a description of the failure, shall document that alternate storage capacity is unavailable, and shall specify a schedule of actions that will ensure that the control equipment will be repaired or the vessel will be emptied as soon as practical. [40 CFR 63.120(a)(4)].

(5) Except as provided in paragraph (a)(6) of 40 CFR 63.120, for all the inspections required by paragraphs (a)(2)(ii), (a)(3)(i), and (a)(3)(iii) of 40 CFR 63.120, the owner or operator shall notify the Administrator in writing at least 30 calendar days prior to the refilling of each storage vessel to afford the Administrator the opportunity to have an observer present. [40 CFR 63.120(a)(5)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 030	(EPN 438)	No. 1 EDC Shore Tank/ Alternate Vacuum Feed Tank
	(EPN 454)	No. 5 EDC Shore Tank
	(EPN 455)	No. 6 EDC Shore Tank

4. Specific Monitoring Requirements (Continued):

(6) If the inspection required by paragraph (a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of 40 CFR 63.120 is not planned and the owner or operator could not have known about the inspection 30 calendar days in advance of refilling the vessel, the owner or operator shall notify the Administrator at least 7 calendar days prior to the refilling of the storage vessel. Notification may be made by telephone and immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the Administrator at least 7 calendar days prior to refilling. [40 CFR 63.120(a)(6)].

(7) If during the inspections required by paragraph (a)(2)(ii), (a)(3)(i), or (a)(3)(iii) of 40 CFR 63.120, the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area, the owner or operator shall rep-air the items as necessary so that none of the conditions specified in 40 CFR 63.120(a)(7) exist before refilling the storage vessel with organic HAP. [40 CFR 63.120(a)(7)].

5. Specific Recordkeeping Requirements:

a. Each owner or operator of a Group 1 or Group 2 storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation. For each Group 2 storage vessel, the owner or operator is not required to comply with any other provisions of 40 CFR 63.119 through 63.123 other than those required by 40 CFR 63.123(a) unless such vessel is part of an emissions average as described in 40 CFR 63.150. [40 CFR 63.123(a)].

b. An owner or operator who elects to comply with 40 CFR 63.119(b) shall keep a record that each inspection required by 40 CFR 63.120(a) was performed. [40 CFR 63.123(c)].

c. An owner or operator who elects to utilize an extension in emptying a storage vessel in accordance with 40 CFR 63.120 (a)(4), (b)(7)(ii), or (b)(8) shall keep in a readily accessible location, the documentation specified in 40 CFR 63.120 (a)(4), (b)(7)(ii), or (b)(8), as applicable. [40 CFR 63.123(g)].

d. The permittee shall keep records of all visual inspections performed under 40 CFR 63.120(a)(3). Deficiencies shall be noted.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 030	(EPN 438)	No. 1 EDC Shore Tank/ Alternate Vacuum Feed Tank
	(EPN 454)	No. 5 EDC Shore Tank
	(EPN 455)	No. 6 EDC Shore Tank

6. Specific Reporting Requirements:

An owner or operator who elects to comply with 40 CFR 63.119(b) by using a fixed roof and an internal floating roof or with 40 CFR 63.119(d) by using an external floating roof converted to an internal floating roof shall submit, as part of the Periodic Report required under 40 CFR 63.152(c), the results of each inspection conducted in accordance with 40 CFR 63.120(a) in which a failure is detected in the control equipment. [40 CFR 63.122(d)].

a. For vessels for which annual inspections are required under 40 CFR 63.120 (a)(2)(i) or (a)(3)(ii), the specifications and requirements listed in paragraphs (d)(1)(i) through (d)(1)(iii) of 40 CFR 63.122 apply. [40 CFR 63.122(d)(1)].

(i) A failure is defined as any time in which the internal floating roof is not resting on the surface of the liquid inside the storage vessel and is not resting on the leg supports; or there is liquid on the floating roof; or the seal is detached from the internal floating roof; or there are holes, tears, or other openings in the seal or seal fabric; or there are visible gaps between the seal and the wall of the storage vessel. [40 CFR 63.122(d)(1)(i)].

(ii) Except as provided in paragraph (d)(1)(iii) of 40 CFR 63.122, each Periodic Report shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made or the date the storage vessel was emptied. [40 CFR 63.122(d)(1)(ii)].

(iii) If an extension is utilized in accordance with 40 CFR 63.120(a)(4), the owner or operator shall, in the next Periodic Report, identify the vessel; include the documentation specified in 40 CFR 63.120(a)(4); and describe the date the storage vessel was emptied and the nature of and date the repair was made. [40 CFR 63.122(d)(1)(iii)].

b. For vessels for which inspections are required under 40 CFR 63.120 (a)(2)(ii), (a)(3)(i), or (a)(3)(iii), the specifications and requirements listed in paragraphs (d)(2)(i) and (d)(2)(ii) of 40 CFR 63.122 apply. [40 CFR 63.122(d)(2)].

(i) A failure is defined as any time in which the internal floating roof has defects; or the primary seal has holes, tears, or other openings in the seal or the seal fabric; or the secondary seal (if one has been installed) has holes, tears, or other openings in the seal or the seal fabric; or the gaskets no longer close off the liquid surface from the atmosphere; or the slotted membrane has more than 10 percent open area. [40 CFR 63.122(d)(2)(i)].

(ii) Each Periodic Report required under 40 CFR 63.152(c) shall include the date of the inspection, identification of each storage vessel in which a failure was detected, and a description of the failure. The Periodic Report shall also describe the nature of and date the repair was made. [40 CFR 63.122(d)(2)(ii)].

7. Specific Control Equipment Operating Conditions:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 032 (EPN 439) No. 2 EDC Shore Tank
599,458-gallon capacity
Fixed Roof
Date of construction: 1980
Control: Vented to Oxy Incinerator (453) or Primary Thermal Incinerator (530) for control of organic HAPs

(EPN 734) No. 7 EDC Shore Tank
1,325,825-gallon capacity
Fixed Roof
Date of construction: 1990
Control: Vented to Oxy Incinerator (453) or Primary Thermal Incinerator (530) for control of organic HAPs

(EPN 735) No. 8 EDC Shore Tank
1,325,825-gallon capacity
Fixed Roof
Date of construction: 1992
Control: Vented to Oxy Incinerator (453) or Primary Thermal Incinerator (530) for control of organic HAPs

(EPN 736) No. 9 EDC Shore Tank
1,325,825-gallon capacity
Fixed Roof
Date of construction: 1994
Control: Vented to Oxy Incinerator (453) or Primary Thermal Incinerator (530) for control of organic HAPs

(EPN TK-30-B2) Vacuum Column Feed Tank
100,000-gallon capacity
Fixed Roof
Date of construction: 1978
*Date of Modification: 2004
Control: Vented to Oxy Incinerator (453) or Primary Thermal Incinerator (530) for control of organic HAPs
*NOTE: Not a modification as defined in 40 CFR 63 & 40 CFR 60.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU#032

(EPN 439)	No. 2 EDC Shore Tank
(EPN 734)	No. 7 EDC Shore Tank
(EPN 735)	No. 8 EDC Shore Tank
(EPN 736)	No. 9 EDC Shore Tank
(EPN TK-30-B2)	Vacuum Column Feed Tank

NOTE: All of the above tanks (2, 7, 8, 9, Vac Feed) are >151 m^3 in capacity and the maximum true vapor pressure of the stored liquid is greater than 5.2 kPa, therefore the Tanks are Group 1 vessels, pursuant to Table 5 to 40 CFR 63, subpart G for existing sources or Table 6 for new sources.

The maximum true vapor pressure of the stored liquid is less than 76.6 kPa (11.11 psia).

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart G, *National emission standard for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations, and wastewater*, applies to the storage tanks listed above.

40 CFR 60 Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984* is applicable to (EPN 734) No. 7 EDC Shore Tank, (EPN 735) No. 8 EDC Shore Tank, and (EPN 736) No. 9 EDC Shore Tank.

Pursuant to 40 CFR 63.110(b)(1), *Overlap with other regulations for storage vessels.* (1) After the compliance dates specified in 40 CFR 63.100 of 40 CRF 63 subpart F, a Group 1 or Group 2 storage vessel that is also subject to the provisions of 40 CFR part 60, subpart Kb is required to comply only with the provisions of 40 CFR 63 subpart G.

1. Operating Limitations:

a. The owner or operator shall comply with the requirements of 40 CFR 63.119(a)(1) according to the provisions of 40 CFR 63. [40 CFR 63.119(a)].

(1) For each Group 1 storage vessel (as defined in table 5 of 40 CFR 63, Subpart G, for existing sources and table for new sources) storing a liquid for which the maximum true vapor pressure of the total organic hazardous air pollutants in the liquid is less than 76.6 kilopascals, the owner or operator shall reduce hazardous air pollutants emissions to the atmosphere either by operating and maintaining a fixed roof and internal floating roof, an external floating roof, an external floating roof converted to an internal floating roof, a closed vent system and control device, routing the emissions to a process or a fuel gas system, or vapor balancing in accordance with the requirements in 40 CFR 63.119 (b), (c), (d), (e), (f), or (g), or equivalent as provided in 40 CFR 63.121 [40 CFR 63.119(a)(1)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU#032

(EPN 439)	No. 2 EDC Shore Tank
(EPN 734)	No. 7 EDC Shore Tank
(EPN 735)	No. 8 EDC Shore Tank
(EPN 736)	No. 9 EDC Shore Tank
(EPN TK-30-B2)	Vacuum Column Feed Tank

1. Operating Limitations (Continued):

b. The owner or operator who elects to use a closed vent system and control device, as defined in 40 CFR 63.111, to comply with the requirements 40 CFR 63.119(a)(1) shall comply with the requirements specified in paragraphs 40 CFR 63.119(e)(1) through (e)(5) [40 CFR 63.119(e)].

(1) Except as provided in paragraph 40 CFR 63.119 (e)(2), the control device shall be designed and operated to reduce inlet emissions of total organic HAP by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements of 40 CFR 63.11(b) in 40 CFR 63 Subpart A [40 CFR 63.119(e)(1)].

(2) If the owner or operator can demonstrate that a control device installed on a storage vessel on or before December 31, 1992 is designed to reduce inlet emissions of total organic HAP by greater than or equal to 90 percent but less than 95 percent, then the control device is required to be operated to reduce inlet emissions of total organic HAP by 90 percent or greater [40 CFR 63.119(e)(2)].

(3) Periods of planned routine maintenance of the control device, during which the control device does not meet the specifications of paragraph 40 CFR 63.119(e)(1) or 40 CFR 63.119(e)(2), as applicable, shall not exceed 240 hours per year [40 CFR 63.119(e)(3)].

(4) The specifications and requirements in 40 CFR 63.119 (e)(1) and 40 CFR 63.119 (e)(2) for control devices do not apply during periods of planned routine maintenance [40 CFR 63.119(e)(4)].

(5) The specifications and requirements in 40 CFR 63.119 (e)(1) and 40 CFR 63.119 (e)(2) for control devices do not apply during a control system malfunction [40 CFR 63.119(e)(5)].

Compliance Demonstration Method:
During planned routine maintenance of the control device, emissions from these tanks shall be vented to a backup control device, except for up to 240 hours per year as allowed by 40 CFR 63.119(e)(3). Refer to **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, **6. Specific Reporting Requirements**, and **7. Specific Control Equipment Operating Conditions**.

2. Emission Limitations:

The tank shall be equipped with a closed vent system and a control device designed and operated to reduce inlet emissions of total organic hazardous air pollutants by 95 percent or greater [40 CFR 63.119(e)(1)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU#032

(EPN 439)	No. 2 EDC Shore Tank
(EPN 734)	No. 7 EDC Shore Tank
(EPN 735)	No. 8 EDC Shore Tank
(EPN 736)	No. 9 EDC Shore Tank
(EPN TK-30-B2)	Vacuum Column Feed Tank

Compliance Demonstration Method:
Refer to **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, **6. Specific Reporting Requirements**, and **7. Specific Control Equipment Operating Conditions**.

3. Testing Requirements:

40 CFR 63.120(d)(1)(ii) - The performance test required by 40 CFR 63.116(c) shall be used to demonstrate compliance with 40 CFR 63.119(e). Compliance shall be determined through the results of the latest performance test performed as required by 40 CFR 63.116(c).

4. Specific Monitoring Requirements:

See Specific Monitoring Requirements for the Oxy Incinerator (453) and the Primary Thermal Incinerator (530).

5. Specific Recordkeeping Requirements:

40 CFR 63.123 - The permittee shall maintain records of the following information:

a. Dimensions and capacity of the storage vessel for the lifetime of the tank.
b. All measured values of the parameters continuously monitored in accordance with 40 CFR 63.120(d)(5).
c. The planned routine maintenance performed on the control device, when the back-up control device was not available, including the duration of each time the control device does not meet the specifications of 40 CFR 63.119(e)(1) due to the planned routine maintenance. This record shall include the following information:
    i. The first time of the day and date the requirements of 40 CFR 63.119(e)(1) were not met at the beginning of the planned routine maintenance.
    ii. The first time of day and date the requirements of 40 CFR 63.119(e)(1) were met at the conclusion of the planned routine maintenance.
d. The occurrence and duration of each malfunction of the control device or the continuous monitoring systems, when the back-up control device was not available, including the action taken and whether it complies with the permittees startup, shutdown, and malfunction plan.

6. Specific Reporting Requirements:

The permittee shall report to the Division, the following information [40 CFR 63.122]:

a. The Initial Notification as required by 40 CFR 63.152(b). (Submitted: 8/17/94).
b. The Notification of Compliance Status as required by 40 CFR 63.152(b). (Submitted 9/18/97). This shall include the following information:

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU#032
(EPN 439) No. 2 EDC Shore Tank
(EPN 734) No. 7 EDC Shore Tank
(EPN 735) No. 8 EDC Shore Tank
(EPN 736) No. 9 EDC Shore Tank
(EPN TK-30-B2) Vacuum Column Feed Tank

6. Specific Reporting Requirements (Continued):

i. A monitoring plan containing the following:
   (A) A description of the parameter or parameters to be monitored to ensure that the control device is being properly operated and maintained.
   (B) An explanation of the criteria used for selection of the parameter or parameters to be monitored.
   (C) The frequency with which monitoring will be performed.
   (D) Identification of the storage vessel and control device for which the performance test will be submitted.
   (E) Identification of the emission point(s) that share the control device with the storage vessel and for which the performance test will be conducted.

ii. The operating range for each monitoring parameter identified in the monitoring plan, which shall represent the conditions for which the control device is being properly operated and maintained.

iii. Results of the performance test required by 40 CFR 63.116(c).

c. Periodic reports as required by 40 CFR 63.152(c) including the following information:

i. A description of the planned routine maintenance that is anticipated to be performed for the control device, when the back-up control device will not be available, during the next 6 months including the type of maintenance necessary, planned frequency of maintenance, and lengths of maintenance periods. [40 CFR 63.122(g)(1)(i)]

ii. A description of the planned routine maintenance that was performed for the control device, when the back-up control device was not available, during the previous 6 months including the type of maintenance performed and the total number of hours during those 6 months that the control device did not meet the requirements of 40 CFR 63.119(e)(1), due to planned routine maintenance. [40 CFR 63.122(g)(1)(ii)]

iii. A description of each occurrence when the monitored parameters were outside of the parameter ranges documented in the Notification of Compliance Status in accordance with 40 CFR 63.120(d)(3)(i). This description shall include an identification of the control device for which the measured parameters to be outside of the established ranges and the cause for the measured parameters to be outside of the established ranges. [40 CFR 63.122(g)(2)]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU#032

(EPN 439)	No. 2 EDC Shore Tank
(EPN 734)	No. 7 EDC Shore Tank
(EPN 735)	No. 8 EDC Shore Tank
(EPN 736)	No. 9 EDC Shore Tank
(EPN TK-30-B2)	Vacuum Column Feed Tank

7. Specific Control Equipment Operating Conditions:

a. The storage tank shall be operated at all times with a closed vent system and a control device with 95 percent control efficiency, except during control system malfunctions. During planned routine maintenance, this vessel shall be vented to a back-up control device to meet the requirements of 40 CFR 63.119(e)(1). The control device shall be operated and maintained such that the monitored parameters remain with in the range specified in the Notification of Compliance Status. Planned routine maintenance of the control device, during which the control device does not meet the requirements of 40 CFR 63.119(e)(1) shall not exceed 240 hours per year.

b. See Requirements for the Oxy Incinerator (453) and the Primary Thermal Incinerator (530).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU 039 (EPN TK-33-B2)

South Synthesis Solvesso Tank
Former Strip out tank moved to replace EPN 410 and 411 (8/8/2007 Minor Revision)
10,575-gallon capacity
Fixed Roof
Date of Modification: 2004 (Converted to a Solvesso Storage Tank)
Maximum True Vapor Pressure of Stored Material: 0.0026 psi

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart G, *National emission standard for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations, and wastewater,* applies to the storage tank listed above.

1. Operating Limitations: None

2. Emission Limitations: None

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:
Each owner or operator of a Group 1 or Group 2 storage vessel shall keep readily accessible records showing the dimensions of the storage vessel and an analysis showing the capacity of the storage vessel. This record shall be kept as long as the storage vessel retains Group 1 or Group 2 status and is in operation. For each Group 2 storage vessel, the owner or operator is not required to comply with any other provisions of 40 CFR 63.119 through 63.123 other than those required by this paragraph unless such vessel is part of an emissions average as described in 40 CFR 63.150. [40 CFR 63.123 (a)].

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 032 (EPN 441) North/South Cracking Sump Tank
3,000-gallon capacity
Fixed Roof
Date of construction: 1979
Control: Vented to Oxy Incinerator (453) or Primary Thermal Incinerator (530) for control of organic HAPs

(EPN 442) East Cracking Sump Tank
3,000-gallon capacity
Fixed Roof
Date of construction: 1979
Control: Vented to Oxy Incinerator (453) or Primary Thermal Incinerator (530) for control of organic HAPs

Note: EPN 441 & 442 vent to Westlake Monomers incinerators - Oxy Incinerator (453) or Primary Thermal Incinerator (530).

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart F, *National Emission Standards for Organic Hazardous Air Pollutants From the Synthetic Organic Chemical Manufacturing Industry.*

40 CFR 63.105, *Maintenance Wastewater Requirements*, is applicable to maintenance wastewater containing organic HAPs listed in Table 9 of 40 CFR 63 Subpart G.

401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart G, *National emission standard for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations, and wastewater*, applies to the North/South Cracking Sump Tank. There are no applicable requirements.

40 CFR 63.149(a) is not applicable, according to Table 35 (subpart G), which only applies to tanks with capacities of 38 m^3 (10,038 gallons) or greater. [40 CFR 63, Subpart G, Table 35, footnote C]

1. Operating Limitations:
Pursuant to 40 CFR 63.105 (b), the owner or operator shall prepare a description of maintenance procedures for management of wastewaters generated from the emptying and purging of equipment in the process during temporary shutdowns for inspections, maintenance, and repair (i.e., a maintenance-turnaround) and during periods which are not shutdowns (i.e., routine maintenance). The descriptions shall:

a. Specify the process equipment or maintenance tasks that are anticipated to create wastewater during maintenance activities. [40 CFR 63.105(b)(1)]
b. Specify the procedures that will be followed to properly manage the wastewater and control organic HAP emissions to the atmosphere; and [40 CFR 63.105(b)(2)]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 032 (EPN 441) North/South Cracking Sump Tank and (EPN 442) East Cracking Sump Tank.

1. Operating Limitations (Continued):

c. Specify the procedures to be followed when clearing materials from process equipment. [40 CFR 63.105(b)(3)]

2. Emission Limitations: None

3. Testing Requirements: None

4. Specific Monitoring Requirements:

a. The owner or operator shall modify and update the information required by 40 CFR 63.105(b) as needed following each maintenance procedure based on the actions taken and the wastewaters generated in the preceding maintenance procedure. [40 CFR 63.105 (c)]

b. The owner or operator shall incorporate the procedures described in 40 CFR 63.105(b) and (c) as part of the startup, shutdown, and malfunction plan required under 40 CFR 63.6(e)(3). [40 CFR 63.105(d)]

5. Specific Recordkeeping Requirements:

a. The owner or operator shall maintain a record of the information required by 40 CFR 63.105 (b) and (c) as part of the start-up, shutdown, and malfunction plan required under 40 CFR 63.6(e)(3) of 40 CFR63 Subpart A. [40 CFR 63.105(e)]

b. When actions taken by the owner or operator during a startup or shutdown (and the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction (including actions taken to correct a malfunction) are consistent with the procedures specified in the affected source's startup, shutdown, and malfunction plan, the owner or operator must keep records for that event which demonstrate that the procedures specified in the plan were followed. These records may take the form of a "checklist," or other effective form of recordkeeping that confirms conformance with the startup, shutdown, and malfunction plan and describes the actions taken for that event. In addition, the owner or operator must keep records of these events as specified in 40 CFR 63.10(b), including records of the occurrence and duration of each startup or shutdown (if the startup or shutdown causes the source to exceed any applicable emission limitation in the relevant emission standards), or malfunction of operation and each malfunction of the air pollution control and monitoring equipment. Furthermore, the owner or operator shall confirm that actions taken during the relevant reporting period during periods of startup, shutdown, and malfunction were consistent with the affected source's startup, shutdown and malfunction plan in the semiannual (or more frequent) startup, shutdown, and malfunction report required in 40 CFR 63.10(d)(5). [40 CFR 63.6(e)(3)(C)(iii)]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 032 (EPN 441) North/South Cracking Sump Tank and (EPN 442) East Cracking Sump Tank.

6. Specific Reporting Requirements:
The owner or operator shall submit all reports as required by 40 CFR 63.6(e)(3) and 40 CFR 63.10(d)(5). Refer to **5. Specific Recordkeeping Requirements**.

7. Specific Control Equipment Operating Conditions:
See Operating Conditions for Emission Point 453 (Oxy Incinerator) and 530 (Primary Incinerator).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 031 (EPN 449) South Synthesis EDC Absorber (High Point Vent)

Description - The South Synthesis Absorber recovers EDC and other organics from the vents to the Oxychlorination reactor off gases before being vented to the atmosphere, rendering the vent a HON Group 2 process vent. The requirements below only apply during times in which the Absorber vent is vented to the atmosphere directly after the South Synthesis Absorber, instead of going to the Oxy Incinerator (453) or the Primary Thermal Incinerator (530).

The process vent is defined as the point of discharge into the atmosphere or point of entry to a control device. For purposes of the HON, the Solvesso Recovery Outlet Process Vent acts as the process vent for the Oxychlorination EDC Reactor System.

* The Solvesso Recovery System Outlet Process Vent is a Group 2 process vent under the HON that meets the following conditions:
    - Flow rate greater than or equal to 0.005 standard cubic meter per minute;
    - HAP concentration greater than or equal to 50 parts per million by volume; and,
    - Total Resource Effectiveness (TRE) value of 1.0 but less than or equal to 4.0.
* Demonstrated by stack testing performed in October 2003 and May 2005.

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart G, *National emission standard for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations, and wastewater*, applies to the South Synthesis EDC Absorber Vent.

401 KAR 57:002, which incorporates by reference federal regulations 40 CFR 61 Subpart F, National *Emission Standard for Vinyl Chloride.*

1. Operating Limitations:

a. After the compliance dates specified in 40 CFR 63.100 of subpart F, the owner or operator of any Group 2 process vent that is also subject to the provisions of 40 CFR part 61, subpart F shall comply with the provisions specified in either 40 CFR 63.110 (f)(2)(i) or (f)(2)(ii). [40 CFR 63.110(f)(2)]

(1) If the process vent is not already controlled by a combustion device, then the owner or operator shall comply with the provisions of both 40 CFR part 63 subpart G and 40 CFR part 61, subpart F. [40 CFR 63.110(f)(2)(ii)]

b. During times in which the absorber vent is vented directly to the atmosphere, the process vent will be controlled by the South Synthesis Absorber such that:

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 031 (EPN 449) South Synthesis EDC Absorber (High Point Vent)

1. Operating Limitations (Continued):

(1) The owner or operator of a Group 2 process vent having a flow rate greater than or equal to 0.005 standard cubic meter per minute, a HAP concentration greater than or equal to 50 parts per million by volume, and a TRE index value greater than 1.0 but less than or equal to 4.0 shall maintain a TRE index value greater than 1.0 and shall comply with the monitoring of recovery device parameters in 40 CFR 63.114(b) or (c), the TRE index calculations of 40 CFR 63.115, and the applicable reporting and recordkeeping provisions of 40 CFR 63.117 and 63.118. Such owner or operator is not subject to any other provisions of 40 CFR 63.114 through 63.118. [40 CFR 63.113(d)]

(2) Each owner or operator of a process vent with a TRE index value greater than 1.0 as specified under 40 CFR 63.113(a)(3) or 63.113(d) that uses one or more recovery devices shall install either an organic monitoring device equipped with a continuous recorder or the monitoring equipment specified in 40 CFR 63.114(b)(1), (b)(2), or (b)(3), depending on the type of recovery device used. All monitoring equipment shall be installed, calibrated, and maintained according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately. Monitoring is not required for process vents with TRE index values greater than 4.0 as specified in 40 CFR 63.113(e). [40 CFR 63.114(b)]

(i) Where an absorber is the final recovery device in the recovery system, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device, each equipped with a continuous recorder shall be used. [40 CFR 63.114(b)(1)]

(ii) As an alternative to 40 CFR 63.114(b)(1), the owner or operator may request approval to monitor other parameters [40 CFR 63.114(c)].

(3) The owner or operator shall establish a range that indicates proper operation of the control or recovery device for each parameter monitored under 40 CFR 64.114 (a), (b), and (c). In order to establish the range, the information required in 40 CFR 63.152(b) shall be submitted in the Notification of Compliance Status or the operating permit application or amendment. The range may be based upon a prior performance test conducted for determining compliance with a regulation promulgated by the EPA, and the owner or operator is not required to conduct a performance test under 40 CFR 63.116, if the prior performance test was conducted using the same methods specified in 40 CFR 63.116 and either no process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes. [40 CFR 63.114(e)]

Compliance Demonstration Method:
For compliance, refer to **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, **6. Specific Reporting Requirements.**

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 031 (EPN 449) South Synthesis EDC Absorber (High Point Vent)

2. Emission Limitations:

During times in which the absorber vent is vented directly to the atmosphere, the process vent will be controlled by the South Synthesis Absorber such that:

a. The process vent is maintained as a HON Group 2 process vent [40 CFR 63.113(d)].
b. The emissions of Vinyl Chloride shall be less than 0.02 lb VCl emitted/100 lbs of EDC produced [40 CFR 61.62(d)] on a 3-hour rolling average.

Compliance Demonstration:

For compliance, refer to **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

3. Testing Requirements:

Testing on May 11-12, 2005 established the Absorber vent as a HON Group 2 process vent with a TRE greater than 1 but less than 4.

4. Specific Monitoring Requirements:

a. The permittee shall monitor the following parameters during times in which the Absorber vent is vented directly to the atmosphere [40 CFR 63.114(e) for i. through v., and 40 CFR 61.62(b) for vi.]:
   i. Solvent Feed Temperature
   ii. Solvent Feed Flow Rate
   iii. Absorber Vent Feed Temperature
   iv. EDC Stripper Vacuum
   v. EDC Stripper Bottoms Temperature
   vi. VCl Ratio (lb VCl emitted/100 lbs EDC produced)

5. Specific Recordkeeping Requirements:

a. The permittee shall maintain daily average records for i. through v. (below), and hourly average records for vi. (below) when the Absorber vent is vented directly to the atmosphere [40 CFR 63.118(b)]:
   i. Solvent Feed Temperature
   ii. Solvent Feed Flow Rate
   iii. Absorber Vent Feed Temperature
   iv. EDC Stripper Vacuum
   v. EDC Stripper Bottoms Temperature
   vi. VCl Ratio (lb VCl emitted/100 lbs EDC produced)
b. The permittee shall maintain records of the TRE index calculations of 40 CFR 63.115.
c. The permittee shall maintain records of the TRE determinations and performance tests in 40 CFR 63.117 and the process vent provisions in 40 CFR 63.118.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 031 (EPN 449) South Synthesis EDC Absorber (High Point Vent)

6. Specific Reporting Requirements:

a. The permittee shall submit semi-annual reports identifying days in which the daily average for the monitored parameters was out of established ranges. [40 CFR 63.118(f)(1)] Refer to **7. Specific Control Equipment Operating Conditions**.

b. The permittee shall submit quarterly reports that identify all 3-hour average periods in which the VCl ratio (as identified in 5.(vi.) above) are in excess of the standard. If emissions in excess of the emission limit are not detected, the report shall contain a statement that no excess emissions have been detected [40 CFR 61.70(c)(1)].

7. Specific Control Equipment Operating Conditions:

The permittee shall maintain the following parameters in the proper ranges as established during the latest stack test for the times in which the Absorber vent is vented directly to the atmosphere [40 CFR 63.114(e) for i. through v., and 40 CFR 61.62(b) for vi.]:

i. Solvent Feed Temperature
ii. Solvent Feed Flow Rate
iii. Absorber Vent Feed Temperature
iv. EDC Stripper Vacuum
v. EDC Stripper Bottoms Temperature
vi. VCl Ratio (lb VCl emitted/100 lbs EDC produced)

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 032 (EPN 453) Oxy Incinerator

Capacity:	67.1 mmBtu/hr
Fuel:	Plant fuel gas and supplemental natural gas
Emissions:	Process gas, waste gas, and natural gas combustion emissions
Controls:	Packed wet scrubber following incinerator for acid gas
Constructed:	1982

EU# 033 (EPN 530) Primary Thermal Incinerator

Capacity:	60.0 mmBtu/hr
Fuel:	Plant fuel gas and supplemental natural gas
Emissions:	Process gas, waste gas, and natural gas combustion emissions
Controls:	Quench, absorber, and packed wet scrubber following incinerator for acid gas
Constructed:	1977

In addition to the process vent gas covered by EPN 453 and 530, the following emission units may be vented to either the Oxy Incinerator (453) and/or the Primary Thermal Incinerator (530).

Sources from Vinyls Tank Farm:
No. 2 EDC Shore Tank (439)
No. 7 EDC Shore Tank (734)
No. 8 EDC Shore Tank (735)
No. 9 EDC Shore Tank (736)
Vacuum Feed Column Tank (TK-30-B2)

Sources from Westlake CA&O Plant:
Contaminated Water Storage Tank (445)
Storm water Storage Tank (446)
A and B EDC Recovery Columns (EE-4)

Sources from Goodrich:
Bioventing Operation
C Stripper in Groundwater Stripping System

All vent gases are routed to the incinerators via the following vent headers:
Dry EDC Vent Header
Wet EDC Vent Header
Dry VCM Vent Header
Wet VCM Vent Header
Vacuum Vent Header
EDC Absorber Vent Header
Depressuring Header
HTDC/Product Column Vent Header (only connected to the Oxy Incinerator)

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU #032 (EPN 453) Oxy Incinerator
EU#033 (EPN 530) Primary Thermal Incinerator

APPLICABLE REGULATIONS:

a. 401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart G, *National emission standard for organic hazardous air pollutants from the synthetic organic chemical manufacturing industry for process vents, storage vessels, transfer operations, and wastewater*, applies to the Oxy Incinerator (EPN 453) and the Primary Thermal Incinerator (EPN 530).

b. 401 KAR 57:002, which incorporates by reference federal regulation 40 CFR 61 Subpart F, *National emission standard for vinyl chloride*, applies to the Oxy Incinerator (EPN 453) and the Primary Thermal Incinerator (EPN 530). However, pursuant to 40 CFR 63.110(f)(1), the permittee is only required to comply with the provisions of 40 CFR 63 Subpart G.

1. Operating Limitations:
None

2. Emission Limitations:

a. Total organic hazardous air pollutant emissions shall not exceed a concentration of 20 parts per million by volume, calculated on a dry basis, corrected to 3 percent oxygen [40 CFR 63.113(a)(2)].

b. Overall emissions of hydrogen halides and halogens, as defined in 40 CFR 63.111, shall be reduced by 95% or the outlet mass of total hydrogen halides and halogens shall be reduced to less than 0.45 kilograms per hour, whichever is less stringent [40 CFR 63.113(c)(1)].

Compliance Demonstration Method:
Refer to **3. Testing Requirements**, **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, **6. Specific Reporting Requirements**, and **7. Specific Control Equipment Operating Conditions**.

3. Testing Requirements:

a. Compliance with the 20 parts per million by volume total organic HAP emission limit listed above shall be determined by the latest stack test performed on the emission unit as per Reference Method 18, and approved by the Division. The permittee has fulfilled this requirement (latest stack test performed 6/2001).). The permittee shall re-test the unit within 180 days following final issuance of permit V-05-011.

b. An owner or operator using a combustion device followed by a scrubber to control halogenated vent streams shall conduct a performance test per Reference Method 26 or 26A [40 CFR 63.116(d)]. The permittee has fulfilled this requirement (per testing performed 6/2001). The permittee shall re-test the unit within 180 days following final issuance of permit V-05-011.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU #032 (EPN 453) Oxy Incinerator
EU#033 (EPN 530) Primary Thermal Incinerator

4. Specific Monitoring Requirements:

a. 40 CFR 63.114(a) - The permittee shall maintain, calibrate and operate according to manufacturer's specification, monitoring devices for the continuous measurement of:
   i. The temperature in the firebox of the incinerator;
   ii. pH of the scrubber effluent;
   iii. Liquid flow at the scrubber influent; and
   iv. Pressure drop across the scrubber
   v. Inlet gas flow
   vi. Liquid/gas ratio
b. The permittee shall monitor the gas stream flow as described in the determination plan in accordance with 40 CFR 63.114(a)(4)(ii)(C). [40 CFR 63.114 (a)(4)(ii)]
c. The monitoring systems shall be reviewed on an annual basis for accuracy, as required in 40 CFR 63.103(c)(2)(iv).

5. Specific Recordkeeping Requirements:

40 CFR 63.118(a) - The permittee shall maintain records of the following information:

a. Continuous records of the following parameters:
   i. The temperature in the firebox of the incinerator;
   ii. pH of the scrubber effluent;
   iii. Liquid flow at the scrubber influent; and
   iv. Pressure drop across the scrubber.
b. Daily average values of each continuously monitored parameter for each operating day determined according to the procedures specified in 40 CFR 63.152(f).
c. Gas stream flow determined as described in the permittee's determination plan in accordance with 40 CFR 63.114(a)(4)(ii)(C).
d. Records of all calibration checks and maintenance for the continuous monitoring systems.

6. Specific Reporting Requirements:

40 CFR 63.118 - The permittee shall submit to the Division semiannual reports including the following:

a. The daily average values of monitored parameters for all operating days when the daily average values were outside of the ranges established in the Notification of Compliance Status.
b. The duration of periods when monitoring data is not collected for each excursion caused by insufficient monitoring data for Group 1 points.
c. Records of the occurrence and duration of each malfunction of the incinerator or the continuous monitoring systems.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU #032	(EPN 453)	Oxy Incinerator
EU#033	(EPN 530)	Primary Thermal Incinerator

7. Specific Control Equipment Operating Conditions:

The permittee shall maintain the following parameters within the specified ranges for the daily averages determined in the latest stack test (refer to Section **G.5** for testing requirements) that showed compliance with the emission limits:

a. The firebox temperature;
b. The pressure drop in the scrubber;
c. The pH of the scrubber circulation water;
d. The liquid circulation flow in the scrubber;
e. The liquid/gas ratio in the scrubber.

An **excursion** from the operating range specified above for any parameter is any 24-hour period during which the parameter monitored was outside the range specified in the latest stack test that showed compliance with the emission limits. Refer to Section **G.5** for testing requirements.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 010	(EPN 514 A/B)	South Cracking Furnace #13	
		Rating:	60.0 mmBtu/hr
		Fuel:	Plant fuel gas*
		Date of construction:	1973
		Controls:	None
EU# 011	(EPN 526)	North Cracking Furnace 1A	
		Rating:	56.0 mmBtu/hr
		Fuel:	Plant fuel gas*
		Date of construction:	1981
		Controls:	None
	(EPN 527)	North Cracking Furnace 2A	
		Rating:	56.0 mmBtu/hr
		Fuel:	Plant fuel gas*
		Date of construction:	1981
		Controls:	None
EU# 012	(EPN 534)	EDC Cracking Furnace #3	
		Rating:	106.68 mmBtu/hr
		Fuel:	Plant fuel gas*
		Date of construction:	1993
		Controls:	None
	(EPN 535)	EDC Cracking Furnace #4	
		Rating:	106.68 mmBtu/hr
		Fuel:	Plant fuel gas*
		Date of construction:	1995
		Controls:	None

* Process fuel gas includes natural gas, ethylene plant fuel gas, hydrogen, propane and mixtures thereof.

APPLICABLE REGULATIONS:
401 KAR 59:015, *New Indirect Heat Exchangers,* applies to EPN 514 A/B, EPN 526, EPN 527, EPN 534, and EPN 535.

NON-APPLICABLE REGULATIONS:
40 CFR 60, Subparts D, Da, Db, and Dc are not applicable. The Cracking Furnaces are process heaters and are not used to generate steam.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 010	(EPN 514 A/B)	South Cracking Furnace #13
EU# 011	(EPN 526)	North Cracking Furnace 1A
	(EPN 527)	North Cracking Furnace 2A
EU# 012	(EPN 534)	EDC Cracking Furnace #3
	(EPN 535)	EDC Cracking Furnace #4

1. Operating Limitations: None

2. Emission Limitations:

a. Emissions of particulate matter shall not exceed 0.1 lb/mmBtu [401 KAR 59:015, Section 4 (1) (b)].

b. Emissions of sulfur dioxide shall not exceed 0.8 lb/mmBtu [401 KAR 59:015, Section 5 (1) (b)].

Visible Emission Limits:

For any fuel used, the opacity of visible emissions shall not exceed 20 percent [401 KAR 59:015, Section 4(2)] except as provided below:

(1) Pursuant to 401 KAR 59:015, Section 4(2)(c), the opacity standard does not apply during building a new fire for the period required to bring the boiler up to operating conditions, provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

(2) Pursuant to 401 KAR 50:055, Section 2(4), the opacity standard does not apply during periods of startup and shutdown.

Compliance Demonstration Method:

Compliance with the particulate matter limit (lb/mmBtu), the sulfur dioxide limit (lb/mmBtu), and the opacity limit is demonstrated while burning process fuel gas.

3. Testing Requirements:

Pursuant to 401 KAR 59:015, Section 8, the reference methods in Appendix A of 40 CFR 60 except as provided in 401 KAR 50:045 shall be used to determine compliance with standards as prescribed in 4 and 5 of 401 KAR 59:015. Testing is only required when requested by the Division or otherwise indicated by the permit and/or applicable regulation.

4. Specific Monitoring Requirements:

None

5. Specific Recordkeeping Requirements:

None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 010	(EPN 514 A/B)	South Cracking Furnace #13
EU# 011	(EPN 526)	North Cracking Furnace 1A
	(EPN 527)	North Cracking Furnace 2A
EU# 012	(EPN 534)	EDC Cracking Furnace #3
	(EPN 535)	EDC Cracking Furnace #4

6. Specific Reporting Requirements:
None

7. Specific Control Equipment Operating Conditions:
None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 034	(EPN 519)	North Cracking Decoking Pot Date of construction: 1973 Controls: Quench Scrubber Maximum Process Rate: 56 lb/hr (0.028 ton/hr)
	(EPN 520)	South Cracking Decoking Pot Date of construction: 1973 Controls: Quench Scrubber Maximum Process Rate: 56 lb/hr (0.028 ton/hr)
	(EPN 521)	East Cracking Decoking Pot Date of construction: 1973 Controls: Quench Scrubber Maximum Process Rate: 56 lb/hr (0.028 ton/hr)

Description - The decoking pots are used for decoking the cracking furnace coils. The decoking pots are essentially a submerged vent scrubber used to control particulate emissions.

APPLICABLE REGULATIONS:
401 KAR 61:020, *Existing Process Operations*, applies to the emissions of particulate matter from the North, South, and East Decoking Pots.

1. Operating Limitations:
Refer to the compliance demonstration method for **2. Emission Limitations.**

2. Emission Limitations:
For *each* Decoking Pot:
a. Particulate emissions shall not exceed 2.58 pounds per hour [401 KAR 61:020, Section 3 (2)].
b. Visible emissions shall not equal or exceed 20 percent opacity [401 KAR 61:020, Section 3 (1)].

Compliance Demonstration Method:
For *each* Decoking Pot:
The submerged quench scrubber associated with each decoking pot shall control emissions of particulate matter and be operated properly in accordance with manufacturer's specifications and/or standard operating procedures at all times the furnace coils are decoked. The permittee is required to use the submerged quench scrubber associated with each decoking pot in order meet the respective particulate matter emission standard for each pot. During periods of normal operation of the submerged quench scrubber, compliance is demonstrated for the mass emission standard and opacity limit. Refer to **5. Specific Recordkeeping Requirements**.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 034	(EPN 519)	North Cracking Decoking Pot
	(EPN 520)	South Cracking Decoking Pot
	(EPN 521)	East Cracking Decoking Pot

3. Testing Requirements: None

4. Specific Monitoring Requirements: None

5. Specific Recordkeeping Requirements:
The permittee shall record the occurrence, duration, cause, and any corrective action taken for each incident when a cracking furnace is decoked but the corresponding submerged quench scrubber is not in operation.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 009 (EPN 524) Vinyl Chloride Flare
Constructed: 1967

Description - The Vinyl Chloride Flare is used for emergency relief valve discharges from equipment in the EDC-VCl plant and as a control device for residual leaked material from relief valves, rupture disks and emergency shutdown equipment. The presence of the flare pilot flame will be monitored to ensure proper operation of the flare for safety purposes. If the discharge is routed to the flare and the conditions of 40 CFR 60.18 are met, then 40 CFR 61.65(d)(2) could apply instead of conditions for "emergency" relief valve discharges. **Refer to 8. Alternative Operating Scenario** below.

APPLICABLE REGULATIONS:
401 KAR 63:015, *Flares*, applies to the Vinyl Chloride Flare. 401 KAR 63:015 is applicable when the flare is used to waste gas streams [401 KAR 63:015, Section 2 (2)].

40 CFR 60 Subpart A, General Provisions. If the flare is used as a control device to comply with 40 CFR 61 Subpart F, National Emission Standards for Vinyl Chloride, then the permittee shall comply with 40 CFR 60.18 (d) and 40 CFR 60.18(f)(2) in accordance with 40 CFR 61.65(d)(2)(i).

1. Operating Limitations: None

2. Emission Limitations:
Visible emissions from the Vinyl Chloride Flare shall not exceed twenty (20) percent opacity for more than three (3) minutes in any one (1) day [401 KAR 63:015, Section 3].

Compliance Demonstration Method:
Whenever waste gas is sent to the Vinyl Chloride Flare, the permittee shall perform the monitoring and recordkeeping requirements listed under **4. Specific Monitoring requirements** and **5. Specific Recordkeeping Requirements**.

3. Testing Requirements: None

4. Specific Monitoring Requirements:
Whenever waste gas is sent to the Vinyl Chloride Flare for combustion, the permittee shall monitor the flare for visible emissions and maintain the records described in subsection **5.a Specific Recordkeeping Requirements.**

5. Specific Recordkeeping Requirements:
a. Whenever waste gas is sent to the Vinyl Chloride Flare for combustion, the permittee shall maintain daily records of whether any air emissions were visible from the flare. If no visible emissions are observed, then no further observations or records are required. If visible emissions are observed, the permittee shall perform the following:

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 009 (EPN 524) Vinyl Chloride Flare

5. Specific Recordkeeping Requirements (Continued):

i. The permittee shall perform a Method 9 reading for the flare. The opacity observed shall be recorded in the daily log. The reading shall be performed by a representative of the permittee certified in Visible Emissions Evaluations. The permittee shall maintain a list of all individuals that are certified Visible Emissions Evaluators and the date of certification.

ii. The permittee shall observe and record in the daily log the following additional information regarding the flare:

(1) The color of the emissions;
(2) Whether the emissions were light or heavy;
(3) The total duration of the visible emission incident;
(4) The cause of the abnormal emissions; and
(5) Any corrective actions taken.

b. The permittee shall maintain records of all routine and non-routine maintenance activities performed at the flare.

6. Specific Reporting Requirements: None

7. Specific Control Equipment Operating Conditions: None

8. Alternate Operating Scenario:

If the flare is used as a control device to comply with 40 CFR 61 Subpart F, National Emission Standards for Vinyl Chloride, then the permittee shall comply with 40 CFR 60.18 (d) and 40 CFR 60.18(f)(2) in accordance with 40 CFR 61.65(d)(2)(i).

a. Owners or operators of flares used to comply with the provisions of 40 CFR Part 60 Subpart A shall monitor these control devices to ensure that they are operated and maintained in conformance with their designs. Applicable subparts will provide provisions stating how owners or operators of flares shall monitor these control devices. [40 CFR 60.18(d)]

b. The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device to detect the presence of a flame. [40 CFR 60.18(f)(2)]

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 036 (EPN FUG-MON-H) Monomers Plant Fugitives Subject to MACT H

The following is an approximate count of the total pipeline equipment at the entire Monomers plant. The pipeline equipment to which 40 CFR 63 Subpart H, 40 CFR 60 Subpart VV, or 40 CFR 61 Subpart F or V, at the Monomers plant, is applicable is included in this total.

27,028	Flanges	282	Open End Valves	2,093	Gas Valves
297	Relief Valves	147	Light Liquid Pumps	3	Compressors
6,081	Light Liquid Valves	136	Connectors		

NOTE - The pipeline equipment count listed above reflects an accurate count of the equipment as of the date of issuance of this permit but is not intended to limit the permittee to the exact numbers specified. The permittee may add or remove pipeline equipment without a permit revision as long as the equipment continues to comply with the applicable requirements listed below.

APPLICABLE REGULATIONS:

a. 401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart H, *National emission standard for organic hazardous air pollutants for equipment leaks*, applies to the pipeline equipment in the Monomer Plant (FUG-MON-H)
b. 401 KAR 60:005, which incorporates by reference federal regulation 40 CFR 60 Subpart VV, *Standards of performance for equipment leaks of VOC in the synthetic organic chemicals manufacturing industry*, applies only to the following pipeline equipment in the Monomer Plant:
   - East EDC Oxy Reactor Off-Gas Recycling
   - South EDC Oxy A Reactor Off-Gas Recycling
   - South EDC Oxy B Reactor Off-Gas Recycling
   - Oxy Crude EDC Stripper
   - #8 EDC Shore Tank
   - #9 EDC Shore Tank
   - #3 EDC Cracking Furnace
c. 401 KAR 57:002, which incorporates by reference federal regulation 40 CFR 61 Subpart F, *National emission standard for vinyl chloride*, applies to the pipeline equipment in the Monomer Plant (FUG-MON-H).
d. 401 KAR 57:002, which incorporates by reference federal regulation 40 CFR 61 Subpart V, *National emission standard for equipment leaks*, applies to the pipeline equipment in the Monomer Plant (FUG-MON-H).

Per 40 CFR 63.160(b), equipment to which 40 CFR 63 Subpart H applies will be deemed in compliance with the requirements of 40 CFR 60 or 61, including 40 CFR 60 Subparts VV and 40 CFR 61 Subparts F and V, if the requirements of 40 CFR 63 Subpart H are met and the source is subject to the provisions of a specific subpart in 40 CFR part 63, that references 40 CFR 63.160(b).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 036 (EPN FUG-MON-H) Monomers Plant Fugitives Subject to MACT H

APPLICABLE REGULATIONS (CONTINUED):
For the purposes of this permit, the requirements of 40 CFR 60 Subpart VV, 40 CFR 61 Subparts F and V, and 40 CFR 63 Subpart H have been streamlined. As a result, to satisfy the requirements of the four applicable regulations for pipeline equipment, *the permittee is required to comply with 40 CFR 63 Subpart H for Emission Point EPN-FUG-MON*. All pipeline equipment subject to the above regulations (a. through d.), in VOC, VHAP or vinyl chloride service, shall be considered, for purposes of applicability and compliance with 40 CFR 63 Subpart H, as if it were in organic hazardous air pollutant (HAP) service. Compliance with 40 CFR 63 Subpart H shall be deemed to constitute compliance with 40 CFR 60 Subparts VV, and 40 CFR 61 Subpart F and V.

1. **Operating Limitations:** For the pipeline equipment, the permittee shall implement a leak detection and repair (LDAR) program containing the following elements:
   a. Each piece of pipeline equipment shall be identified such that it can be distinguished readily from equipment that is not subject to 40 CFR 63 Subpart H [40 CFR 63.162 (c)].
   b. When a leak is detected as specified in 40 CFR 63.163 and 63.164; 63.168 and 63.169; and 63:172 through 63.174, the procedures described in 40 CFR 63.162 (f) (1) - (3) shall be followed to identify the leaking piece.
   c. Specific standards for each type of pipeline equipment described under **2. Emission Limitations** below.

   Compliance Demonstration Method: Pursuant to 40 CFR 63.162 (a), compliance with 40 CFR 63 Subpart H shall be determined by review of the records required by 63.181 and the reports required by 63.182, review of performance test results, and by inspections.

2. **Emission Limitations:**
   The permittee shall incorporate the following elements in the required leak detection and repair (LDAR) program. If any of the equipment qualifies for the specific exemptions available in 40 CFR 63 Subpart H, the permittee shall maintain records of the reason(s) why the equipment is exempt.
   a. Standards: Pumps in light liquid service [40 CFR 63.163]:

40 CFR 63.163 (a)	Implementation and compliance provisions
40 CFR 63.163 (b)	Monitoring requirements, leak detection levels, frequency of monitoring
40 CFR 63.163 (c)	Repair procedures and time frames
40 CFR 63.163 (d)	Calculation procedures to determine percent leaking pumps and requirements for quality improvement programs
40 CFR 63.163 (e)-(j)	Exemptions for specific types of pumps

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 036 (EPN FUG-MON-H) Monomers Plant Fugitives Subject to MACT H

2. Emission Limitations (Continued):

b. Standards: Compressors [40 CFR 63.164]:

40 CFR 63.164 (a)-(e)	Operations requirements
40 CFR 63.164 (f)	Criteria for leak detection
40 CFR 63.164 (g)	Repair procedures and time frames
40 CFR 63.164 (h), (i)	Exemptions for specific types of compressors

c. Standards: Pressure relief devices in gas/vapor service [40 CFR 63.165]:

40 CFR 63.165 (a)	Operational requirements
40 CFR 63.165 (b)	Pressure release procedures
40 CFR 63.165 (c)-(d)	Exemptions for specific types of pressure relief devices

d. Standards: Sampling Connection Systems [40 CFR 63.166]:

40 CFR 63.166 (a)-(c)	Operational requirements

e. Standards: Open-ended valves or lines [40 CFR 63.167]:

40 CFR 63.167 (a)-(c)	Operational requirements
40 CFR 63.167 (d)-(e)	Exemptions for specific types of valves

f. Standards: Valves in gas/vapor service and in light liquid service [40 CFR 63.168]:

40 CFR 63.168 (a)	Operational requirements
40 CFR 63.168 (b)-(d)	Monitoring requirements and intervals
40 CFR 63.168 (e)	Calculation procedures to determine percent leaking valves
40 CFR 63.168 (f)	Leak repair time frames
40 CFR 63.168 (g)	First attempt repair procedures
40 CFR 63.168 (h)-(i)	Exemptions for unsafe-to-monitor and difficult-to-monitor valves

g. Standards: Pumps, valves, connectors, agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service [40 CFR 63.169]:

40 CFR 63.169 (a)	Monitoring requirements and frequency
40 CFR 63.169 (b)	Leak detection levels
40 CFR 63.169 (c), (d)	Leak repair time frames and procedures

h. Standards: Delay of repair [40 CFR 63.171]:

40 CFR 63.171	Allowances for delay of repair

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 036 (EPN FUG-MON-H) Monomers Plant Fugitives Subject to MACT H

2. Emission Limitations: (continued)

i. Standards: Connectors in gas/vapor service and in light liquid service [40 CFR 63.174]:

40 CFR 63.174 (a)	Operational requirements
40 CFR 63.174 (b)	Monitoring requirements and intervals
40 CFR 63.174 (c)	Procedures for open connectors or connectors with broken seals
40 CFR 63.174 (d)	Leak repair time frames
40 CFR 63.174 (e)	Monitoring frequency for repaired connectors
40 CFR 63.174 (f)-(h)	Exemptions for unsafe-to-monitor, unsafe-to-repair, inaccessible, or ceramic connectors
40 CFR 63.174 (i)	Calculation procedures to determine percent leaking connectors
40 CFR 63.174 (j)	Optional credit for removed connectors

j. Quality improvement program for valves [40 CFR 63.175]:

Pursuant to 40 CFR 63.168 (d)(1)(ii), in Phase III, the permittee may elect to implement the following quality improvement programs if the percent of leaking valves is equal to or exceeds 2 percent:

40 CFR 63.175 (a)	Quality improvement program alternatives
40 CFR 63.175 (b)	Criteria for ending quality improvement programs
40 CFR 63.175 (c)	Alternatives following achievement of less than 2 percent leaking valves target
40 CFR 63.175 (d)	Quality improvement program to demonstrate further progress
40 CFR 63.175 (e)	Quality improvement program of technology review and improvement

k. Quality improvement program for pumps [40 CFR 63.176]:

Pursuant to 40 CFR 63.163 (d)(2), if, in Phase III, calculated on a 6-month rolling average, the greater of either 10 percent of the pumps or three pumps in a process unit (or plant site) leak, the permittee shall implement the following quality improvement programs for pumps:

40 CFR 63.176 (a)	Applicability criteria
40 CFR 63.176 (b)	Criteria for ending the quality improvement program
40 CFR 63.176 (c)	Criteria for resumption of the quality improvement program
40 CFR 63.176 (d)	Quality improvement program elements

Compliance Demonstration Method:

A copy of the leak detection and repair (LDAR) program meeting the criteria listed above shall be kept available at a readily accessible location for inspection.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 036 (EPN FUG-MON-H) Monomers Plant Fugitives Subject to MACT H

3. Testing Requirements:

a. The permittee shall comply with the following test methods and procedures requirements pursuant to 40 CFR 63.180 (a):
   40 CFR 63.180 (b) Monitoring procedures, test methods and calibration procedures
   40 CFR 63.180 (c) Leak detection monitoring procedures
   40 CFR 63.180 (d) Procedures for determining organic HAP service applicability
   Fulfill all testing requirement per **2. Emission Limitations.**
b. See General Condition **G**. (d).

4. Specific Monitoring Requirements:

a. See **3. Testing Requirements** above.
b. Fulfill all monitoring requirements per **2. Emission Limitations.**

5. Specific Recordkeeping Requirements: [40 CFR 63.181]

a. The permittee may comply with the recordkeeping requirements for Emission Points FUG-MON-H in one recordkeeping system, if the system identifies each record by process unit and the program being implemented (e.g. quarterly monitoring, quality improvement) for each type of equipment. All records required by 40 CFR 63.181 shall be maintained in a manner that can be readily accessed at the plant site.
b. The permittee shall maintain all records pertaining to the pipeline equipment required by 40 CFR 63.181 (b).
c. For visual inspections, the permittee shall document that the inspection was conducted and the date of the inspection. These records shall be kept for a period of five years, according to 40 CFR 63.181 (c).
d. When a leak is detected, the information specified in 40 CFR 63.181 (d) shall be recorded and kept for five years.
e. If the permittee implements any of the quality improvement programs required by 40 CFR 63.175 and 63.176, the records specified in 40 CFR 63.181 (h)(1)-(9) shall be maintained for the period of the quality improvement program for Emission Points FUG-MON-H.

6. Specific Reporting Requirements:

The permittee shall submit the following reports:

a. 40 CFR 63.182 (a)(1), Initial Notification. The permittee has fulfilled this requirement through documentation dated August 17, 1994 submitted to the Division.
b. 40 CFR 63.182 (a)(2), Notification of Compliance Status. The permittee has fulfilled this requirement through documentation dated January 20, 1995 submitted to the Division.
c. 40 CFR 63.182 (a)(3), Periodic Reports - The permittee shall submit to the Division, semiannually, the information required by 40 CFR 63.182 (d)(2).

7. Specific Control Equipment Operating Conditions:

None.

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 035	(EPN 457)	South Synthesis Cooling Tower
EU# 037	(EPN 458)	East Cracking Cooling Tower
EU# 038	(EPN 459)	South Cracking Cooling Tower

APPLICABLE REGULATIONS:
401 KAR 63:002, which incorporates by reference federal regulation 40 CFR 63 Subpart F, *National emission standard for organic hazardous air pollutants form the synthetic organic chemical manufacturing industry*, applies to the cooling towers. 40 CFR 63.104, applies to each of the cooling towers listed above for heat exchange system requirements.
401 KAR 63:010, *Fugitive emissions*, applies to each of the cooling towers listed above.

1. Operating Limitations:
All reasonable measures shall be taken to prevent particulate matter from becoming airborne from the cooling tower at all times [401 KAR 63:010, Section 3(1)].

Compliance Demonstration Method:
Refer to **4. Specific Monitoring Requirements**, **5. Specific Recordkeeping Requirements**, and **6. Specific Reporting Requirements**.

2. Emission Limitations:
a. Unless one or more of the conditions specified in paragraphs (a)(1) through (a)(6) of 40 CFR 63.104 are met, owners and operators of sources subject to 40 CFR Subpart F shall monitor each heat exchange system used to cool process equipment in a chemical manufacturing process unit meeting the conditions of 40 CFR 63.100 (b)(1) through (b)(3) of 40 CFR 63 Subpart F, except for chemical manufacturing process units meeting the condition specified in 40 CFR 63.100(c), according to the provisions in either paragraph (b) or (c) of 40 CFR 63.104 [40 CFR 63.104 (a)].
b. All reasonable measures shall be taken to prevent particulate matter from becoming airborne from the cooling tower at all times [401 KAR 63:010, Section 3(1)].

Compliance Demonstration Method:
a. The Cooling Tower is in compliance 40 CFR 63.104(a) by monitoring the cooling tower for indication of leaks in accordance with 40 CFR 63.104(b) [40 CFR 63.104(a)]. Refer to **F.9** for compliance reporting.
b. The new cell on the South Synthesis Cooling Tower shall be equipped with a mist eliminator.

3. Testing Requirements:
The cooling water HAP concentration shall be tested according to the appropriate EPA method in 40 CFR Part 136 according to 40 CFR 63.104(b).

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 035	(EPN 457)	South Synthesis Cooling Tower
EU# 037	(EPN 458)	East Cracking Cooling Tower
EU# 038	(EPN 459)	South Cracking Cooling Tower

4. Specific Monitoring Requirements:

The owner or operator who elects to comply with the requirements of paragraph (a) of 40 CFR 63.104 by monitoring the cooling water for the presence of one or more organic hazardous air pollutants or other representative substances whose presence in cooling water indicates a leak shall comply with the requirements specified in paragraphs (b)(1) through (b)(6) of 40 CFR 63.104. The cooling water shall be monitored for total hazardous air pollutants, total volatile organic compounds, total organic carbon, one or more speciated HAP compounds, or other representative substances that would indicate the presence of a leak in the heat exchange system [40 CFR 63.104(b)].

a. The cooling water shall be monitored monthly for the first 6 months and quarterly thereafter to detect leaks [40 CFR 63.104(b)(1)].

b. (i) For recirculating heat exchange systems (cooling tower systems), the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 4 of 40 CFR 63 Subpart F [40 CFR 63.104(b)(2)(i)].

(ii) For once-through heat exchange systems, the monitoring of speciated hazardous air pollutants or total hazardous air pollutants refers to the hazardous air pollutants listed in table 9 of 40 CFR Part 63 Subpart G [40 CFR 63.104(b)(2)(ii)].

c. The concentration of the monitored substance(s) in the cooling water shall be determined using any EPA-approved method listed 40 CFR 63.136 as long as the method is sensitive to concentrations as low as 10 parts per million and the same method is used for both entrance and exit samples. Alternative methods may be used upon approval by the Administrator [40 CFR 63.104(b)(3)].

d. The samples shall be collected either at the entrance and exit of each heat exchange system or at locations where the cooling water enters and exits each heat exchanger or any combination of heat exchangers. [40 CFR 63.104(b)(4)]

(i) For samples taken at the entrance and exit of recirculating heat exchange systems, the entrance is the point at which the cooling water leaves the cooling tower prior to being returned to the process equipment and the exit is the point at which the cooling water is introduced to the cooling tower after being used to cool the process fluid [40 CFR 63.104(b)(4)(i)].

(ii) For samples taken at the entrance and exit of once-through heat exchange systems, the entrance is the point at which the cooling water enters and the exit is the point at which the cooling water exits the plant site or chemical manufacturing process units [40 CFR 63.104(b)(4)(ii)].

(iii) For samples taken at the entrance and exit of each heat exchanger or any combination of heat exchangers in chemical manufacturing process units, the entrance is the point at which the cooling water enters the individual heat exchanger or group of heat exchangers and the exit is the point at which the cooling water exits the heat exchanger or group of heat exchangers [40 CFR 63.104(b)(4)(iii)].

SECTION B - EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

D. MONOMERS PLANT:

EU# 035 (EPN 457) South Synthesis Cooling Tower
EU# 037 (EPN 458) East Cracking Cooling Tower
EU# 038 (EPN 459) South Cracking Cooling Tower

4. Specific Monitoring Requirements (Continued):

e. A minimum of three sets of samples shall be taken at each entrance and exit as defined in paragraph (b)(4) of 40 CFR 63.104. The average entrance and exit concentrations shall then be calculated. The concentration shall be corrected for the addition of any makeup water or for any evaporative losses, as applicable [40 CFR 63.104(b)(5)].

f. A leak is detected if the exit mean concentration is found to be greater than the entrance mean using a one-sided statistical procedure at the 0.05 level of significance and the amount by which it is greater is at least 1 part per million or 10 percent of the entrance mean, whichever is greater [40 CFR 63.104(b)(6)].

5. Specific Recordkeeping Requirements:

Keep records of leaks detected during monitoring and repairs according to 40 CFR 63.104(f)(1).

6. Specific Reporting Requirements:

HON semi-annual periodic reports shall include any delay of repairs for leaks detected during heat exchange system monitoring according to 40 CFR 63.104(f)(2).

7. Specific Control Equipment Operating Conditions:

None

SECTION C - INSIGNIFICANT ACTIVITIES

The following listed activities have been determined to be insignificant activities for this source pursuant to Regulation 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

WESTLAKE CHLOR-ALKALI PLANT:

Description		Generally Applicable Regulation
(EPN 820)	Portable Air Compressor Diesel Engine 400 hp	None
(EPN 823)	HCl Acid Tank 17,000 gallons	None
(EPN 824)	HCl Acid Pump Tank 21,150 gallons	None
(EPN 825)	HCl Acid Head Tank 6,400 gallons	None
(EPN 826)	Sulfuric Acid Truck Loading	None
(EPN 827)	Firewater Diesel Fuel Tank #1 300 gallons	None
(EPN 828)	Firewater Diesel Fuel Tank #2 300 gallons	None
(EPN 842)	Chilled Water Tank 1,900 gallons	None
EPN (845)	Sulfuric Acid Head Tank 500 gallons	None
(EPN 847)	Diesel Fuel Tank 1,000 gallons	None
(EPN 848)	Diesel Fuel Tank 1,000 gallons	None
(EPN 850A)	Regenerate Effluent Tank 37,600 gallons	None
(EPN 850B)	Regenerate Effluent Tank 14,200 gallons	None

SECTION C - INSIGNIFICANT ACTIVITIES

CHLOR-ALKALI PLANT (CONTINUED):

Description		Generally Applicable Regulation
(EPN 855)	H_2SO_4 Tank 93-98% Sulfuric Acid 1,300 gallons	None
(EPN 867)	Prime H_2SO_4 Tank 24,000 gallons	None
(EPN 878)	Strong H_2SO_4 Tank 75 gallons	None
(EPN 879)	5% H_2SO_4 Tank 200 gallons	None
(EPN 888)	Drum Loading Carbon Tetrachloride	None
(EPN 889)	Brine Treatment Tank Bag Dumping	None
(EPN 890)	Chilled Water Tank Propylene Glycol, Water	None
(EPN 891)	Misc. Treatment Chemical Tanks and Vendor-Supplied Totes < 500 gallons	None
(EPN 892)	Misc. Additive and Treatment Chemical Bag Dumping	None
(EPN 893)	Hydrochloric Acid Truck Loading Station <1000 lbs/year HCL emissions	None

SECTION C - INSIGNIFICANT ACTIVITIES

ETHYLENE PLANT:

Description		Generally Applicable Regulation
(EPN 313)	Dryer Regeneration Heater 8.19 mmBtu	None
(EPN 314)	Reactor Regeneration Heater 5.28 mmBtu	None
(EPN 316)	Injection Oil Tank 7,500 gallons	None
(EPN 326)	Ethylene Furnace Decoking	401 KAR 61:020
(EPN 331)	Inhibitor Make-up Tank 1,000 gallons	None
(EPN 337)	Ethylene Storm water Tank 250,000 gallons	None
(EPN 341)	Fuel Stabilizer Tank 1,000 gallons	None
(EPN 350-353)	Four Ethylene Spheres 215,000 gallons	None
(EPN 354-357)	Four Propylene Bullets 36,000 gallons	None
(EPN 358 & 359)	Two C4 Spheres 108,000 gallons	None
(EPN 361)	Turbinol/Lube Oil Tote Tanks < 500 gallons	None
(EPN 365)	Antifoulant Chemical Tank 1000 gallons	None
(EPN 366A)	Cooling Water Tower (portable/temporary) 1,200 gals/min	401 KAR 63:010
(EPN 366B)	Cooling Water Tower (portable/temporary) 1,200 gals/min	401 KAR 63:010

SECTION C - INSIGNIFICANT ACTIVITIES

ETHYLENE PLANT (CONTINUED):

Description		Generally Applicable Regulation
(EPN 369)	Inhibitor Tote Tanks < 500 gallons	None
(EPN 372)	Misc. Treatment Chemical Tanks and Vendor-Supplied Totes < 500 gallons	None
(EPN 373)	Portable Air Compressor Diesel Engine 400 HP	None
(EPN 374)	Cooling Tower #4 Chemical Treatment Tank B 1000 gallons	None
(EPN 375)	Misc. Additive & Treatment Chemical Bag Dumping	401 KAR 63:010
(EPN 376)	Fuel Oil Product Additive Tote Tank 330 gallons gallons, < 1.5 psia	None

E&E UNIT:

Description		Generally Applicable Regulation
(EPN 022)	HCl Acid Tank 19,000 gallons	None
(EPN 032)	Sulfuric Acid Storage Tank 60 gallons	None
(EPN 035)	Sulfuric Acid Day Tank 50 gallons	None
(EPN 036)	Gasoline Storage Tank 1,000 gallons	401 KAR 61:050, Section 3(3)
(EPN 037)	Diesel Storage Tank 1,000 gallons	None
(EPN 040)	Portable Air Compressor Diesel Engine 400 hp	None

SECTION C - INSIGNIFICANT ACTIVITIES

E&E UNIT (CONTINUED):

Description		Generally Applicable Regulation
(EPN 042)	Firewater Diesel Fuel Storage Tank 500 gallons	None
(EPN 043)	Firewater Diesel Fuel Storage Tank 300 gallons	None
(EPN 051)	Pump Barrier Fluid Tank 500 gallons	None
EPN (067)	Polymer Tank 16 gallons	None
(EPN 068)	Polymer Tank 10 gallons	None
(EPN 069)	Polymer Tank 4,000 gallons	None
(EPN 070)	Wastewater Storage Tank Settling Tank 240,000 gallons	None
(EPN 071)	Polymer Tank 700 gallons	None
(EPN 072)	Polymer Tote Tanks 400 gallons	None
(EPN 073)	Wastewater Storage Tank Carbon Filter Backwash 240,000 gallons	None
(EPN 075)	Mix Tank Bag Unloading	401 KAR 63:010
(EPN 076)	Sulfite Tank Bag Unloading	401 KAR 63:010
(EPN 077)	Misc. Treatment Chemical Tanks and Vendor-Supplied Totes < 500 gallons	None

SECTION C - INSIGNIFICANT ACTIVITIES

MONOMERS PLANT:

Description		Generally Applicable Regulation
(EPN 402A)	S. Synthesis Optimeen Tank 560 gallons	None
(EPN 402B)	East Optimeen Tank 300 gallons	None
(EPN 402C)	N. Synthesis Optimeen Tank 300 gallons	None
(EPN 404)	East Catalyst System 25,000 lbs/hr	None
(EPN 406)	Catoxid Kerosene Tank 5,000 gallons	None
(EPN 412)	No. 3 River Tank (500,206 gallons)	None
(EPN 413)	No. 4 River Tank (500,206 gallons)	None
(EPN 425)	Caustic Tank 45,000 gallons	None
(EPN 428A)	Caustic Tank 1,000 gallons	None
(EPN 428B)	Caustic Tank 100 gallons	None
(EPN 430)	E. Cracking Brine Storage Tank	None
(EPN 437)	Catoxid Air Preheater 3,000 cu ft/hr	401 KAR 59:015
(EPN 448)	South Catalyst System 50,000 lbs/hr	None
(EPN 452)	S. Synthesis Storage Tank 3,760 gallons	None

SECTION C - INSIGNIFICANT ACTIVITIES

MONOMERS PLANT (CONTINUED):

Description		Generally Applicable Regulation
(EPN 456)	S. Synthesis Caustic Day Tank 13,668 gallons	None
(EPN 460)	P-7206 2,000 gallons	None
(EPN 461)	S. Syn Lubricant Oil Tank 264 gallons	None
(EPN 462)	Propylene Glycol Tank 330 gallons	None
(EPN 463)	Totes & Misc. Vendor-supplied/Portable Vessels (various sizes)	None
(EPN 464)	N. Cracking Lube Oil Totes < 500 gallons	None
(EPN 465)	Tank Farm Lube Oil Totes < 500 gallons	None
(EPN 466)	A Oxy Reactor Catalyst Addition	None
(EPN 467)	B Oxy Reactor Catalyst Addition	None
(EPN 468)	#4 Oxy Reactor Catalyst Addition	None
(EPN 469)	Catoxid Catalyst Addition	None
(EPN 470)	HTDC Ferric Chloride Addition	None
(EPN 471)	Amine Injection System Totes <500gallons	None
(EPN 472)	Lab Fume Hoods	401 KAR 63:021
(EPN 473)	Portable Internal Combustion Diesel Engines	None
(EPN 474)	Pressure Swing Absorption (PSA) Oxygen Unit 15 ton/day	None

SECTION C - INSIGNIFICANT ACTIVITIES

MONOMERS PLANT:

Description		Generally Applicable Regulation
(EPN 533A)	Muriatic Acid 1 50,000 gallons	None
(EPN 533B)	Muriatic Acid 2 50,000 gallons	None
(EPN 533C)	Muriatic Acid 3 50,000 gallons	None
(EPN 533D)	Muriatic Acid 4 16,700 gallons	None
(EPN 533E)	Muriatic Acid 5 16,700 gallons	None
(EPN 601)	Sulfuric Acid 1 14,359 gallons	None
(EPN 602)	Sulfuric Acid 2 12,530 gallons	None
(EPN 607)	Turbinol Tank 400 gallons	None
(EPN 608)	Misc. Treatment Chemical Tanks and Vendor-Supplied Totes < 500 gallons	None

SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

a. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

b. [Chlorine, Nitrogen Dioxide, Particulate Matter, Sulfur Dioxide, VOCs, HAPs, Benzene, 1,2 Dichloroethane (EDC), and Vinyl Chloride] emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the state implementation plan shall not exceed the respective limitations specified herein.

SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS

Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

SECTION F - MONITORING, RECORD KEEPING, AND REPORTING REQUIREMENTS

1. Pursuant to Section 1b-IV-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
   a. Date, place as defined in this permit, and time of sampling or measurements;
   b. Analyses performance dates;
   c. Company or entity that performed analyses;
   d. Analytical techniques or methods used;
   e. Analyses results; and
   f. Operating conditions during time of sampling or measurement.

2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b-IV-2 and 1a-8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
   a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
   b. To access and copy any records required by the permit:
   c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.
   times are defined as during all hours of operation, during normal office hours; or during an emergency.

4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

5. Summary reports of any monitoring required by this permit shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Sections 1b-V-1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

6. The semi-annual reports are due by January 30th and July 30th of each year. All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. If continuous emission and opacity monitors are required by regulation or this permit, data shall be reported in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All deviations from permit requirements shall be clearly identified in the reports.

7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
   a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
   b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.

8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7 above) to the Regional Office listed on the front of this permit within 30 days. Deviations from permit requirements, including those previously reported under F.7 above, shall be included in the semiannual report required by F.6 [Sections 1b-V, 3 and 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
   a. Identification of the term or condition;
   b. Compliance status of each term or condition of the permit;
   c. Whether compliance was continuous or intermittent;
   d. The method used for determining the compliance status for the source, currently and over the reporting period.
   e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by the thirtieth (30) day following the applicable permit issuance anniversary date, or by January 30th of each year if calendar year reporting is approved by the regional office. Annual compliance certifications should be mailed to each of the following addresses:

Division for Air Quality
Paducah Regional Office
130 Eagle Nest Drive
Paducah, KY 42003

U.S. EPA Region IV
Air Enforcement Branch
Atlanta Federal Center
61 Forsyth St.
Atlanta, GA 30303-8960

Division for Air Quality
Central Files
803 Schenkel Lane
Frankfort, KY 40601

10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.

SECTION G - GENERAL CONDITIONS

1. General Compliance Requirements

   a. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 Section 3(1)(b) and a violation of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act). Noncompliance with this permit is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a-3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

   b. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a-6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

   c. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
      (1) If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
      (2) The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
      (3) The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;
      (4) New requirements become applicable to a source subject to the Acid Rain Program.

      Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

   d. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Sections 1a- 7 and 8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

SECTION G - GENERAL PROVISIONS (CONTINUED)

e. Emission units described in this permit shall demonstrate compliance with applicable requirements if requested by the Division [401 KAR 52:020 Section 3(1)(c)].

f. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

g. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a-14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

h. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a-4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

i. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens. [Section 1a-15-b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

j. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a-10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

k. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3) 2.].

l. This permit does not convey property rights or exclusive privileges [Section 1a-9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

m. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Cabinet or any other federal, state, or local agency.

n. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3) 4.].

SECTION G - GENERAL PROVISIONS (CONTINUED)

o. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3) 1.].

p. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

q. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of permit issuance. Compliance with the conditions of this permit shall be considered compliance with:
(1) Applicable requirements that are included and specifically identified in the permit and
(2) Non-applicable requirements expressly identified in this permit.

2. Permit Expiration and Reapplication Requirements

a. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].

b. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

3. Permit Revisions

a. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).

b. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

SECTION G - GENERAL PROVISIONS (CONTINUED)

4. Construction, Start-Up, and Initial Compliance Demonstration Requirements

a. Construction of any process and/or air pollution control equipment authorized by this permit shall be conducted and completed only in compliance with the conditions of this permit.

b. Within thirty (30) days following commencement of construction and within fifteen (15) days following start-up and attainment of the maximum production rate specified in the permit application, or within fifteen (15) days following the issuance date of this permit, whichever is later, the permittee shall furnish to the Regional Office listed on the front of this permit in writing, with a copy to the Division's Frankfort Central Office, notification of the following:
(1) The date when construction commenced.
(2) The date of start-up of the affected facilities listed in this permit.
(3) The date when the maximum production rate specified in the permit application was achieved.

c. Pursuant to 401 KAR 52:020, Section 3(2), unless construction is commenced within eighteen (18) months after the permit is issued, or begins but is discontinued for a period of eighteen (18) months or is not completed within a reasonable timeframe then the construction and operating authority granted by this permit for those affected facilities for which construction was not completed shall immediately become invalid. Upon written request, the Cabinet may extend these time periods if the source shows good cause.

d. For those affected facilities for which construction is authorized by this permit, a source shall be allowed to construct with the proposed permit. Operational or final permit approval is not granted by this permit until compliance with the applicable standards specified herein has been demonstrated pursuant to 401 KAR 50:055. If compliance is not demonstrated within the prescribed timeframe provided in 401 KAR 50:055, the source shall operate thereafter only for the purpose of demonstrating compliance, unless otherwise authorized by Section I of this permit or order of the Cabinet.

e. This permit shall allow time for the initial start-up, operation, and compliance demonstration of the affected facilities listed herein. However, within sixty (60) days after achieving the maximum production rate at which the affected facilities will be operated but not later than 180 days after initial start-up of such facilities, the permittee shall conduct a performance demonstration on the affected facilities in accordance with 401 KAR 50:055, General compliance requirements. Testing must also be conducted in accordance with General Provisions G.5 of this permit.

f. Terms and conditions in this permit established pursuant to the construction authority of 401 KAR 51:017 or 401 KAR 51:052 shall not expire.

SECTION G - GENERAL PROVISIONS (CONTINUED)

5. Testing Requirements

   a. Pursuant to 401 KAR 50:045 Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least thirty (30) days prior to the test.

   b. Pursuant to 401 KAR 50:045 Section 5, in order to demonstrate that a source is capable of complying with a standard at all times, any required performance test shall be conducted under normal conditions that are representative of the source's operations and create the highest rate of emissions. If [When] the maximum production rate represents a source's highest emissions rate and a performance test is conducted at less than the maximum production rate, a source shall be limited to a production rate of no greater than 110 percent of the average production rate during the performance tests. If and when the facility is capable of operation at the rate specified in the application, the source may retest to demonstrate compliance at the new production rate. The Division for Air Quality may waive these requirements on a case-by-case basis if the source demonstrates to the Division's satisfaction that the source is in compliance with all applicable requirements.

   c. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

6. Acid Rain Program Requirements

   a. If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

   b. The permittee shall comply with all applicable requirements and conditions of the Acid Rain Permit and the Phase II permit application (including the Phase II NO_x compliance plan and averaging plan, if applicable) incorporated into the Title V permit issued for this source. The source shall also comply with all requirements of any revised or future acid rain permit(s) issued to this source.

7. Emergency Provisions

   a. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
   (1) An emergency occurred and the permittee can identify the cause of the emergency;

SECTION G - GENERAL PROVISIONS (CONTINUED)

(2) The permitted facility was at the time being properly operated;
(3) During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
(4) Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
(5) This requirement does not relieve the source of other local, state or federal notification requirements.

b. Emergency conditions listed in General Condition G.7.a above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].

c. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

8. Ozone Depleting Substances

a. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
(1) Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
(2) Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
(3) Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
(4) Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
(5) Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
(6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.

b. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, *Servicing of Motor Vehicle Air Conditioners*.

SECTION G - GENERAL PROVISIONS (CONTINUED)

9. Risk Management Provisions

   a. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

      RMP Reporting Center
      P.O. Box 1515
      Lanham-Seabrook, MD 20703-1515.

b. If requested, submit additional relevant information to the Division or the U.S. EPA.

SECTION H - ALTERNATE OPERATING SCENARIOS

Not Applicable

SECTION I - COMPLIANCE SCHEDULE

NONE